

# PUBLIC HEALTH REPORTS

VOL. 31

DECEMBER 15, 1916.

No. 50

## SEWAGE—POLLUTION OF STREAMS.

### DAMAGES AWARDED AGAINST A CITY BECAUSE OF POLLUTION OF A STREAM BY SEWAGE.

Suit was brought against the city of Princeton, Ky., for damages caused by the pollution of a creek by the city sewage. The court was also asked to issue an injunction prohibiting the city from discharging sewage into the creek. The circuit court granted the injunction and awarded \$2,500 damages against the city.

The Court of Appeals of Kentucky affirmed the judgment for damages, but the injunction was dismissed, as the court found from the evidence that it was possible to discharge the sewage into the stream in such a way as not seriously to injure owners of property below the sewer outlet.

The opinion appears in this issue of the Public Health Reports, page 3431.

---

## ANTHRAX.

### REPORT OF AN OUTBREAK AMONG TANNERY WORKERS, MASSACHUSETTS, 1916.

By WALTER H. BROWN, Epidemiologist, Massachusetts State Department of Health.

The unusual incidence of anthrax reported to this department began in the early part of March, 1916, and called for special investigation. The reports came principally from the towns of Winchester and Woburn. A study of these reports revealed the fact that practically all of the cases were occurring in tannery workers. Closer investigation showed that these individuals were handlers of dried hides. The completed investigation of this subject has demonstrated the potential danger of dried, imported hides.

### Prevalence in Former Years.

During the period from 1865 to 1906 the registration reports of Massachusetts record 128 deaths from anthrax. The detailed records of most of these cases can not be obtained.

Anthrax was made a reportable disease in Massachusetts in August, 1907. Since that time 64 cases have been reported, with 20 deaths. The State records furnish the following data:

Years.	Cases.	Deaths.	Fatality.	Years.	Cases.	Deaths.	Fa-tality.
			<i>Per cent.</i>				<i>Per ct.</i>
1865-1906.....		128		1912.....	11	2	18.2
1907.....	1	4		1913.....	8	3	37.5
1908.....	5	2	40.0	1914.....	8	1	12.5
1909.....	7	1	14.3	1915.....	11	3	27.3
1910.....	7	2	28.6				
1911.....	6	2	33.3	Total.....	64	20	31.3

The indicated fatality rate is considerably above the average experiences, both in England and Germany. The detailed data on these cases has not been recorded. They were distributed in cities and towns as follows: Lynn, 17; Boston, 12; Peabody, 6; Haverhill, 6; Woburn, 3; Norwood, 3; Methuen, 3; Worcester, 2; Dedham, 1; Chelsea, 1; Brockton, 1; Fall River, 1; Springfield, 1; Wakefield, 1; Winchester, 1; Cambridge, 2; Sheffield, 1; Salem, 1; and Revere, 1.

#### A Disease of Animals.

Anthrax is essentially a disease of animals. It is known under a variety of titles, some of which are woolsorters' disease (pulmonary form), malignant pustule (external form), charbon and milzbrand. It is found in practically every country in the world. At the present time cattle and sheep are the chief sufferers. Herbivorous animals are particularly susceptible. There have been numerous epizootics among animals causing enormous economic losses.

Anthrax in man is derived from some domestic animal or commercial animal product, especially hides, hair or wool. The bacillus does not penetrate the unbroken skin, but enters some abrasion, scratch or cut. It occurs particularly among veterinarians, brush makers, leather workers, tanners, and farmers. The comparative danger from the various materials is illustrated by the English statistics from 1899 to 1907, during which time 447 cases, with 120 deaths, from all forms of anthrax were reported.

Workers in—	Cases.	Deaths.	Fatality.	Workers in—	Cases.	Deaths.	Fatality.
			<i>Per cent.</i>				<i>Per cent.</i>
Worsted and wool.....	175	47	26.9	Other industries.....	37	13	35.1
Horsehair and bristles....	104	26	25.0				
Hides and skins.....	131	34	25.9	Total.....	447	129	28.8

Gastrointestinal anthrax may result from the eating of flesh of animals infected with the disease.

## Description of the 1916 Outbreak.

During the period from February 17, 1916, to June 27, 1916, there were 25 cases of human anthrax reported to the State department of health. This was the severest outbreak of this disease ever recorded in Massachusetts. A clinical and epidemiological study of these cases has revealed some interesting facts as to the possible sources and modes of infection, and methods of prevention and treatment of this disease.

While 23 of the 25 reported cases were in persons handling hides, the most interesting group consists of 20 cases which were infected from a common source. An analysis of the early reports showed that the infection was confined to the workers in three tanneries located in the towns of Winchester and Woburn. Further study revealed the fact that every one of the persons infected had been handling dried "China" hides.

From this cargo of hides each one of the tanneries involved received a considerable shipment. Further, the shipping receipts for the hides showed that they arrived at the tanneries before the first case of anthrax occurred.

The next step was to demonstrate the exposure of the infected men to these hides. A comparison of the time when the hides were in the process of being tanned with the working time of the infected men furnished the test. Every one of the men handled the hides bearing the characteristic trade mark. This completed the picture. The fact of hides coming from infected territory, shipped to the tanneries involved, handled by men who came down with anthrax, with no cases in other tanneries, is assumed to be sufficient evidence upon which to convict this shipment of hides of being the cause of this particular outbreak of anthrax.

## Clinical Histories.

The interesting clinical features of this group of cases may be conveniently condensed into the following table:

No.	Date (1916).	City or town.	Occupation.	Location of lesions.	Treatment.	Result.
1	Feb. 17	Worcester..	Woolsorter.....	Left side of neck..	Serum (commercial).	Recovery.
2	Feb. 23	Peabody...	Truckman.....	Right temple.....	Excision. Bichlorid dressing.	Do.
3	Mar. 2	Winchester	Tannery worker (beam house).	Left side of neck...	Excision.....	Death.
4	Mar. 9	Woburn....	.....do.....	Forehead.....	Antiseptic compresses.	Recovery.
5	Mar. 13	.....do.....	.....do.....	.....do.....	Cauterized. Moist bichlorid dressing.	Do.
6	Mar. 14	Chelsea....	Dock laborer.....	Left side of neck...	Bichlorid dressing...	Death.
7	...do....	Winchester	Tannery worker (beam house).	Right side of neck and right thigh.	Excision under ether	Recovery.
8	Mar. 16	Woburn....	.....do.....	Left side of neck...	Antiseptic compresses. Bichlorid dressing.	Do.

No.	Date (1916).	City or town.	Occupation.	Location of lesions.	Treatment.	Results.
9	Mar. 18	Winchester	Tannery worker (beam house).	Right forearm....	Compress, 70 per cent alcohol.	Recovery.
10	Mar. 21	Woburn....	do.....	Left cheek.....	Boric dressing....	Do.
11	do.....	Winchester	Tannery worker (hide splitter).	Left side of neck...	Bichlorid dressing...	Do.
12	do.....	do.....	Tannery worker (die stamper).	do.....	do.....	Do.
13	Mar. 27	Somerville.	Hide weigher.....	do.....	Excision. Bichlorid dressing.	Do.
14	Apr. 10	Woburn....	Teamster.....	do.....	Antiseptic bichlorid dressing.	Do.
15	Apr. 11	Winchester	Tannery worker (beam house).	Right side of neck.	Bichlorid dressing...	Do.
16	Apr. 20	Boston.....	Teamster.....	do.....	Excision.....	Death.
17	do.....	Clinton....	Farm hand.....	Left hand <sup>1</sup> .....	Carbolic dressing...	Recovery.
18	May 1	Woburn....	Tannery worker (beam house).	Left side of cheek...	Bichlorid dressing...	Do.
19	do.....	do.....	Tanner.....	Left cheek.....	do.....	Do.
20	May 2	do.....	Tannery worker (beam house).	Left ear.....	do.....	Do.
21	June 3	do.....	Tannery worker (flesher).	Right side of neck.	Corrosive dressing...	Death.
22	June 4	Winchester	Tannery worker (beam house).	Left side of neck...	Corrosive dressing. Serum 45 c. c. and 20 c. c.	Recovery.
23	June 16	Norwood....	do.....	Right arm.....	Refused treatment..	Recovery as far as known.
24	June 23	Woburn....	Tannery worker.....	Left side of neck...	Antiseptic dressing..	Recovery.
25	June 27	do.....	Tannery worker (beam house).	Right groin.....	Dry, sterile dressing.	Do.

<sup>1</sup> Abrasion of hand received while helping to bury a cow dead from anthrax.

## PARINAUD'S CONJUNCTIVITIS.

### ITS IMPORTANCE TO THE HEALTH OFFICER.

By G. L. COLLINS, Surgeon, United States Public Health Service.

There are few health officers to-day who in their examinations of eyes are not keenly on the lookout for cases of trachoma. So much indeed has been written on the subject that, with the exception possibly of follicular conjunctivitis, the health officer is perhaps inclined to the belief that the formation of granulations of adenoid tissue in the tarsal conjunctivæ and retrotarsal folds is almost pathognomic of trachoma.

Several other conditions must, however, not be forgotten or mistakes may be made and possibly embarrassing situations may be brought about by the necessity of retracting diagnoses reached even after careful and extended observation. The writer well remembers, for instance, two cases shown month after month at the eye clinics in Vienna and regularly diagnosed trachoma by the American postgraduate students, many of them oculists of wide experience. One was a case of tuberculosis of the conjunctiva and the other the chronic stage following an attack of acute blennorrhœa.

Lastly, the examiner must not be led astray by that rare but interesting form of granular conjunctivitis of comparatively recent discovery, known as Parinaud's conjunctivitis, which may closely



simulate trachoma and lead to confusion. It is to illustrate this point that the following quite typical case is described.

The patient, a young woman of exceptional physique and strength, a professional teacher of gymnastics, was referred to the writer when on field duty, from a summer camp, for a troublesome and painful inflammation of the right eye of one week's duration. It was noted that she was rather pale and slightly feverish and restless. Examination of the right eye showed the cornea normal, injection of the bulbar conjunctiva increasing toward the periphery. The conjunctiva of each lid was greatly congested and in each lid, particularly at the nasal side of the upper lid, were noted many granulations. These granulations were particularly marked, too, in the upper retrotarsal fold, where they were crowded close together. The granulations had a peculiar yellowish, semitranslucent appearance, and examination with a loup showed minute white areas on the surface. There was considerable mucoid secretion, but no pus. At one point on the bulbar conjunctiva a minute bright subconjunctival hemorrhage was noted. On close examination a few granulations could also be noted on the epicanthal fold. Acute trachoma was suspected.

In front of the ear on the same side was noted a movable circumscribed swelling, rather soft, quite tender to the touch and evidently an inflamed preauricular lymph gland. The left eye was quite normal.

A collyrium and rest of the eye were prescribed, and the case was observed from time to time for the next four weeks. The first improvement was noted in the swollen lymph gland, which became less tender and much harder, and then began to decrease in size. The systematic symptoms at the same time disappeared. The injection of the conjunctivæ became less marked and the discomfort left the eye. At the present writing, after four weeks, the granulations can still be noted but are much less marked and the inflammation is practically gone.

The above case describes Parinaud's conjunctivitis closely; a monocular acute inflammation of the upper and lower conjunctivæ, with yellowish red granulations especially marked in the retrotarsal folds, some constitutional disturbance, and swelling and pain in the preauricular lymph gland of the affected side; the attack usually coming to an end in several weeks and leaving no untoward results. Sometimes the whole parotid region swells; sometimes the lymph glands suppurate.

While Parinaud suspected as a cause some infection contracted by contact with domestic animals, others have been unable to substantiate this. Careful inquiry in the above-described case failed to obtain any evidence of such a means of infection.

The cause of Parinaud's conjunctivitis remained unknown until the recent work of Verhoff of Boston. He first demonstrated Pari-

naud's conjunctivitis as a distinct histological entity, quite distinct from tubercular conjunctivitis. Lately he has demonstrated in the granulations excised from 12 cases a minute filamentous organism occurring in irregular masses within focal areas of endothelial phagocytes in various stages of necrosis. It has been the writer's privilege to examine carefully Verhoff's preparations while studying in his laboratory and after such an examination the writer is convinced that no one can doubt the organism as the cause.

As noted in the case reported above, recovery usually slowly follows the ordinary treatment of conjunctivitis. Excision of granulations has been found to hasten recovery but is ordinarily unnecessary. Suppurating glands require ordinary surgical measures.

While a rare disease, the possibility of Parinaud's conjunctivitis should not be forgotten by health officers in obstinate cases of granular conjunctivitis suspected of being trachoma. While laboratory methods, the demonstration of trachoma bodies according to the methods of Lindner on the one hand, and Verhoff's filamentous organism on the other, are theoretically possible, such methods would ordinarily be impracticable for the health officer. A search for small glandular swelling in the region of the ear and below it on the affected side and note of any signs of systemic disturbance should, however, be made in cases of monocular granular conjunctivitis in which the diagnosis is obscure, for by so doing the officer may throw light on most confusing situations in which mistakes may cause unnecessary inconvenience and possibly hardship to the patient.

# PREVALENCE OF DISEASE.

*No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring.*

## UNITED STATES.

### CEREBROSPINAL MENINGITIS.

#### Virginia Report for October, 1916.

Place.	New cases reported.	Place.	New cases reported.
Virginia:		Virginia—Continued.	
Albemarle County.....	1	Scott County.....	1
Buchanan County.....	1	Wythe County.....	1
Giles County.....	1	Total.....	6
Lancaster County.....	1		

#### City Reports for Week Ended Nov. 25, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Birmingham, Ala.....		1	Lowell, Mass.....	1	2
Chicago, Ill.....	1		Milwaukee, Wis.....	2	2
Detroit, Mich.....	2		New York, N. Y.....	4	4
Kalamazoo, Mich.....	1		Racine, Wis.....		1
Lexington, Ky.....		1	St. Paul, Minn.....		1

### DIPHTHERIA.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 3415.

### ERYSIPELAS.

#### City Reports for Week Ended Nov. 25, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Binghamton, N. Y.....	3		Los Angeles, Cal.....	1	
Buffalo, N. Y.....	8		Milwaukee, Wis.....	1	1
Butte, Mont.....	1		Muscatine, Iowa.....	1	
Chicago, Ill.....	23	1	Newport, R. I.....		1
Cincinnati, Ohio.....	1	1	New York, N. Y.....		6
Cleveland, Ohio.....	5		Oakland, Cal.....	1	
Covington, Ky.....	1		Omaha, Nebr.....		1
Denver, Colo.....	4		Pasadena, Cal.....	1	
Detroit, Mich.....	6	2	Philadelphia, Pa.....	5	
Duluth, Minn.....	2		Pittsburgh, Pa.....	6	
Fall River, Mass.....		1	Rochester, N. Y.....	1	
Hartford, Conn.....	1		St. Louis, Mo.....	6	
Kalamazoo, Mich.....	1		St. Paul, Minn.....	4	
Long Beach, Cal.....	1		San Francisco, Cal.....	5	1
Lorain, Ohio.....	1		Stockton, Cal.....	1	

## LEPROSY.

## Connecticut—Ansonia.

Collaborating Epidemiologist Black reported that during the week ended December 9, 1916, a case of leprosy was notified at Ansonia, Conn.

## City Reports for Week Ended Nov. 25, 1916.

During the week ended November 25, 1916, one case of leprosy was reported in New Orleans, La., and two cases in New York, N. Y.

## MALARIA.

## Virginia Report for October, 1916.

Place.	New cases reported.	Place.	New cases reported.
<b>Virginia:</b>		<b>Virginia—Continued.</b>	
Accomac County.....	26	Louisa County.....	4
Albemarle County.....	2	Lunenburg County.....	13
Amelia County.....	7	Mecklenburg County.....	20
Amherst County.....	3	Middlesex County.....	11
Bedford County.....	2	Nansemond County.....	51
Botetourt County.....	2	New Kent County.....	5
Brunswick County.....	19	Norfolk County.....	35
Buckingham County.....	2	Northampton County.....	48
Campbell County.....	19	Northumberland County.....	37
Caroline County.....	26	Nottoway County.....	7
Carroll County.....	11	Page County.....	1
Charlotte County.....	1	Pittsylvania County.....	20
Chesterfield County.....	17	Powhatan County.....	19
Cumberland County.....	18	Princess Anne County.....	38
Dinwiddie County.....	16	Prince Edward County.....	9
Elizabeth City County.....	5	Prince George County.....	13
Essex County.....	17	Prince William County.....	3
Fairfax County.....	11	Richmond County.....	6
Giles County.....	1	Rockbridge County.....	1
Gloucester County.....	21	Rockingham County.....	3
Greensville County.....	95	Russell County.....	1
Halifax County.....	83	Scott County.....	2
Hanover County.....	24	Southampton County.....	42
Henrico County.....	12	Stafford County.....	3
Richmond.....	5	Surry County.....	17
Henry County.....	2	Sussex County.....	11
Isle of Wight County.....	43	Warwick County.....	12
James City County.....	27	Washington County.....	5
King and Queen County.....	8	Westmoreland County.....	10
King George County.....	1	Wythe County.....	12
King William County.....	2	York County.....	25
Lancaster County.....	64		
Loudoun County.....	3	Total.....	1,079

## City Reports for Week Ended Nov. 25, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Birmingham, Ala.....		1	Richmond, Va.....		1
Fall River, Mass.....	3		San Francisco, Cal.....	1	
New Orleans, La.....	5		Stockton, Cal.....	1	

## MEASLES.

See Diphtheria, measles, scarlet fever, and tuberculosis, p. 3415.

## PELLAGRA.

## Virginia Report for October, 1916.

Place.	New cases reported.	Place.	New cases reported.
Virginia:		Virginia—Continued.	
Augusta County.....	2	Montgomery County.....	1
Campbell County.....	2	Nelson County.....	1
Dinwiddie County.....	3	Norfolk County.....	1
Elizabeth City County.....	1	Pittsylvania County.....	1
Essex County.....	1	Danville.....	1
Floyd County.....	1	Powhatan County.....	1
Gloucester County.....	1	Shenandoah County.....	1
Halifax County.....	1	Washington County.....	2
Henrico County—		Wythe County.....	1
Richmond.....	2		
Middlesex County.....	1	Total.....	25

## City Reports for Week Ended Nov. 25, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Birmingham, Ala.....		1	Manchester, N. H.....	1	1
Charleston, S. C.....		2	Mobile, Ala.....		2
Galveston, Tex.....		1	Nashville, Tenn.....	2	
Knoxville, Tenn.....	1		Oklahoma, Okla.....		1

## PNEUMONIA.

## City Reports for Week Ended Nov. 25, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Binghamton, N. Y.....	2	3	Lincoln, Nebr.....	2	2
Braddock, Pa.....	1	4	Lorain, Ohio.....	2	
Butler, Pa.....	1	1	Los Angeles, Cal.....	7	6
Chicago, Ill.....	165	75	Manchester, N. H.....	1	1
Cleveland, Ohio.....	31		Philadelphia, Pa.....	42	23
Coffeyville, Kans.....	1		Pittsburgh, Pa.....	25	30
Covington, Ky.....	2		Reading, Pa.....	3	2
Detroit, Mich.....	11	12	Rochester, N. Y.....	7	
East Orange, N. J.....	2		St. Joseph, Mo.....	1	
Grand Rapids, Mich.....	4	1	San Francisco, Cal.....	14	8
Harrisburg, Pa.....	1	1	Schneectady, N. Y.....	2	1
Jackson, Mich.....	6		Springfield, Ohio.....	2	1
Johnstown, Pa.....	1		Stockton, Cal.....	2	1
Kalamazoo, Mich.....	3	1	Wichita, Kans.....	2	
Kansas City, Mo.....	4	14			



## POLIOMYELITIS (INFANTILE PARALYSIS).

## Cases Reported by States.

The following tabular statement shows the number of cases of poliomyelitis reported to the United States Public Health Service by State health authorities during the periods shown:

	Total cases reported.		Total cases reported.
<b>Alabama:</b>		<b>Iowa:</b>	
July 1 to 31.....	77	July 1 to 31.....	30
Aug. 1 to 31.....	62	Aug. 1 to 31.....	82
Sept. 1 to 25.....	12	Sept. 1 to 30.....	66
Oct. 1 to 31.....	8	Oct. 1 to 31.....	31
	159	Nov. 1 to Dec. 2.....	25
<b>Arizona:</b>			234
July 1 to 31.....	2	<b>Kansas:</b>	
Aug. 1 to 31.....	2	July 1 to 31.....	14
Sept. 1 to 25.....	2	Aug. 1 to 31.....	31
	6	Sept. 1 to 30.....	19
<b>Arkansas:</b>		Oct. 1 to 31.....	22
July 1 to 31.....	5	Nov. 1 to 4.....	1
Aug. 1 to 31.....	1		87
Sept. 1 to 30.....	5	<b>Kentucky:</b>	
	11	July 1 to 31.....	15
<b>California:</b>		Aug. 1 to 31.....	19
July 1 to 31.....	12	Sept. 1 to 28.....	1
Aug. 1 to 31.....	18		35
Sept. 1 to 30.....	13	<b>Louisiana:</b>	
Oct. 1 to 31.....	21	July 1 to 31.....	19
Nov. 1 to Dec. 9.....	27	Aug. 1 to 31.....	6
	91	Sept. 1 to 30.....	5
<b>Colorado:</b>		Oct. 1 to 31.....	3
July 1 to 31.....	1	Nov. 1 to Dec. 9.....	4
Aug. 1 to 31.....	2		37
Sept. 1 to 30.....	4	<b>Maine:</b>	
Oct. 1 to Nov. 4.....	5	July 1 to 31.....	0
	12	Aug. 1 to 31.....	26
<b>Connecticut:</b>		Sept. 1 to 30.....	46
July 1 to 31.....	165	Oct. 1 to Nov. 18.....	46
Aug. 1 to 31.....	367		118
Sept. 1 to 30.....	274	<b>Maryland:</b>	
Oct. 1 to 31.....	91	July 1 to 31.....	10
Nov. 1 to Dec. 9.....	20	Aug. 1 to 31.....	64
	917	Sept. 1 to 30.....	100
<b>Delaware:</b>		Oct. 1 to 31.....	120
July 1 to 31.....	1	Nov. 1 to 30.....	43
Aug. 1 to 31.....	11	Dec. 1 to 13.....	0
Sept. 1 to 30.....	36		337
Oct. 1 to Dec. 2.....	28	<b>Massachusetts:</b>	
	76	July 1 to 31.....	107
<b>District of Columbia:</b>		Aug. 1 to 31.....	252
July 1 to 31.....	8	Sept. 1 to 30.....	623
Aug. 1 to 31.....	18	Oct. 1 to 31.....	702
Sept. 1 to 30.....	6	Nov. 1 to 30.....	180
Oct. 1 to 31.....	4	Dec. 1 to 5.....	12
Nov. 1 to 30.....	0		1,876
<b>Florida:</b>		<b>Michigan:</b>	
July 1 to 31.....	4	July 1 to 31.....	51
Aug. 1 to 31.....	3	Aug. 1 to 31.....	163
Sept. 1 to 25.....	1	Sept. 1 to 30.....	166
	36	Oct. 1 to 31.....	97
<b>Georgia:</b>		Nov. 12 to Dec. 9.....	19
<b>Idaho:</b>	(1)		496
Aug. 1 to 31.....	4	<b>Minnesota:</b>	
Sept. 1 to 30.....	3	July 1 to 31.....	142
Oct. 1 to 31.....	2	Aug. 1 to 31.....	377
Nov. 1 to 10.....	1	Sept. 1 to 30.....	199
	10	Oct. 1 to 31.....	148
<b>Illinois:</b>		Nov. 1 to 30.....	49
July 1 to 31.....	76	Dec. 1 to 9.....	4
Aug. 1 to 31.....	339		919
Sept. 1 to 30.....	257	<b>Mississippi:</b>	
Oct. 1 to Dec. 9.....	161	July 1 to 31.....	57
	833	Aug. 1 to 31.....	31
<b>Indiana:</b>		Sept. 1 to 30.....	14
July 1 to 31.....	27	Oct. 1 to 31.....	10
Aug. 1 to 31.....	38		112
Sept. 1 to 30.....	67	<b>Missouri:</b>	
Oct. 1 to 31.....	57	July 1 to 31.....	4
	189	Aug. 1 to 31.....	3
		Sept. 1 to 25.....	4
			11

<sup>1</sup> Disease present, but the number of cases is not known.

## POLIOMYELITIS (INFANTILE PARALYSIS)—Continued.

## Cases Reported by States—Continued.

	Total cases reported.		Total cases reported.
Montana:		South Carolina:	
July 1 to 31.....	11	July 1 to 31.....	20
Aug. 1 to 31.....	28	Aug. 1 to 31.....	58
Sept. 1 to 30.....	33	Sept. 1 to 30.....	24
Oct. 1 to Dec. 9.....	16	Oct. 1 to 31.....	13
	188		115
Nebraska:		South Dakota:	
July 1 to 31.....	1	July 1 to 31.....	5
Aug. 1 to 31.....	7	Aug. 1 to 31.....	19
Sept. 1 to 28.....	6	Sept. 1 to 25.....	14
	14		38
Nevada:		Tennessee:	
July 1 to Sept. 24.....	0	July 1 to 31.....	18
New Hampshire:		Aug. 1 to 31.....	21
July 1 to 31.....	7	Sept. 1 to 25.....	0
Aug. 1 to 31.....	16		39
Sept. 1 to 30.....	33	Texas:	
Oct. 1 to 31.....	5	July 1 to 31.....	22
	61	Aug. 1 to 31.....	25
New Jersey:		Sept. 1 to 30.....	16
July 1 to 31.....	640		63
Aug. 1 to 31.....	2,114	Utah:	
Sept. 1 to 30.....	957	Aug. 1 to 31.....	5
Oct. 1 to 31.....	254	Vermont:	
Nov. 1 to 4.....	3	July 1 to 31.....	1
	3,968	Aug. 1 to 31.....	8
New Mexico:		Sept. 1 to 30.....	23
July 1 to Sept. 25.....	0	Oct. 1 to 31.....	19
New York (exclusive of New York City):			51
July 1 to 31.....	517	Virginia:	
Aug. 1 to 31.....	1,527	July 1 to 31.....	24
Sept. 1 to 30.....	1,064	Aug. 1 to 31.....	44
Oct. 1 to 31.....	334	Sept. 1 to 30.....	64
	3,442	Oct. 1 to 31.....	48
North Carolina:	(2)		180
North Dakota:		Washington:	
July 1 to 31.....	0	July 1 to 31.....	5
Aug. 1 to 31.....	2	Aug. 1 to 31.....	2
Sept. 1 to 30.....	16	Sept. 1 to 30.....	10
Oct. 1 to 31.....	5	Oct. 1 to 31.....	4
	23	Nov. 1 to Dec. 2.....	3
Ohio:			24
July 1 to 31.....	94	West Virginia:	
Aug. 1 to 31.....	168	July 1 to 31.....	5
Sept. 1 to 30.....	138	Aug. 1 to 31.....	10
Oct. 1 to 31.....	56	Sept. 1 to 30.....	18
	456	Oct. 1 to 31.....	18
Oklahoma:		Nov. 1 to Dec. 9.....	3
July 1 to 31.....	12		54
Aug. 1 to 31.....	10	Wisconsin:	
Sept. 1 to Nov. 15.....	13	July 1 to 31.....	20
	35	Aug. 1 to 31.....	173
Oregon:		Sept. 1 to 30.....	158
Sept. 1 to 30.....	5	Oct. 1 to 31.....	84
Oct. 1 to 31.....	28	Nov. 1 to 30.....	19
Nov. 1 to 4.....	2		454
	35	Wyoming:	
Pennsylvania:		July 1 to 31.....	0
July 1 to 31.....	107	Aug. 1 to 31.....	1
Aug. 1 to 31.....	711	Sept. 1 to 30.....	3
Sept. 1 to 30.....	743	Oct. 1 to 31.....	0
Oct. 8 to 31.....	250	Nov. 1 to 13.....	1
Nov. 1 to Dec. 8.....	90		5
	1,901		
Rhode Island:			
July 1 to 31.....	26		
Aug. 1 to 31.....	57		
Sept. 1 to 30.....	70		
Oct. 1 to Dec. 9.....	67		
	220		

<sup>1</sup> Not including cases on Crow Reservation.<sup>2</sup> Disease present, but the number of cases is not known.

## POLIOMYELITIS (INFANTILE PARALYSIS)—Continued.

## City Reports, July 2 to December 9, 1916.

The following table shows the number of cases of poliomyelitis reported to the United States Public Health Service by the health departments of the cities which reported 5 or more cases in any one week:

City.	Cases reported for two weeks ended—											Week ended Dec. 9.
	July 15.	July 29.	Aug. 12.	Aug. 26.	Sept. 9.	Sept. 23.	Oct. 7.	Oct. 21.	Nov. 4.	Nov. 18.	Dec. 2.	
Akron, Ohio.	1	1		1	8	6		2				
Atlantic City, N. J.			7	7	5	4						
Baltimore, Md.	1	3	6	13	28	23	49	41	19	8	6	
Bayonne, N. J.	1	1	16	18	6	1						
Birmingham, Ala.	1	4	7	2					1			
Boston, Mass.	1	7	12	12	35	93	129	107	60	22	12	1
Bridgeport, Conn.		9	12	3	3	9	5			2	1	
Brookline, Mass.				1	1	3	1	10	1	1		
Cambridge, Mass.			1	4	3	9	16	17	11	1	7	3
Camden, N. J.		2	16	19	14	9	4					
Chicago, Ill.	6	23	38	47	49	41	23	16	10	1		1
Cincinnati, Ohio.	1	2	4	9	5	9	9	3	4			2
Cleveland, Ohio.	8	3	1	3	7	4	3	1	1		1	
Detroit, Mich.	2	4	5	6	5	6	14	3				
East Orange, N. J.		4	9	18	16	5	2		1	1		
Flint, Mich.		4	4	11	4	4	2	3	4			
Grand Rapids, Mich.	1	2	1	4	3	7	1	2	1	2	1	2
Harrison, N. J.	1	1	10	16								
Hartford, Conn.	2	4	3		13	10	8	3	5	3		1
Haverhill, Mass.	1			6	1	1	2					
Indianapolis, Ind.	1	1	2		5	6	5	1		1		
Jersey City, N. J.	9	25	49	43	31	14	13	7			1	
Kearny, N. J.	1	3	13	9		3						
Long Branch, N. J.		1	2		3	8	5	1				
Lynn, Mass.				1	4	3	5	14	9	5	1	
Malden, Mass.		1		2		8	13	8	8	5	1	
Manchester, N. H.			1		8	6				1		
Minneapolis, Minn.			16	26	16	5	3	3	2			
Montclair, N. J.		2	4	7	3	1	5	5	2	1		
Newark, N. J.	79	137	507	380	134	68	29	9	2	3		
Newburyport, Mass.				1	7	8	3	3			1	
New Haven, Conn.	3	25	21	13	10	8	1	1	1	1		
New York, N. Y.	1,468	1,653	2,268	1,572	793	408	238	115	56	18	18	6
North Adams, Mass.		4	1	5	4	5	1				1	
Northampton, Mass.			1	7	2	1	1	5	2	2		1
Orange, N. J.	3	12	24	18	19	3	1					
Perth Amboy, N. J.	4	6	9	5	4	2						
Philadelphia, Pa.	2	25	117	238	245	155	106	53	31	14	5	2
Pittsburgh, Pa.	2	4	6	4	10	3	2	2	1	1	1	
Pittsfield, Mass.	1	1	1	9	12	14	8	13	4		1	
Plainfield, N. J.		5	2	16	7	6	4	3				
Portland, Oreg.						2	4	9	2	1		
Providence, R. I.	3	4	7	5	17	27	18	10	17	8	2	
Quincy, Mass.						9	4					
St. Louis, Mo.	2	2		5	2							
St. Paul, Minn.	1	5	19	15	15	5	6	1	1			
Somerville, Mass.		1		7	3	8	5	7	8	5	1	
Springfield, Mass.		2	4	5	14	20	14	7	5	9	1	
Syracuse, N. Y.			12	57	82	49	23	5	4	2		
Toledo, Ohio.	11	19	27	20	18	3	4	3	2			
Trenton, N. J.	2	2	4	18	18	37	54	20	5	1		
Waltham, Mass.						2	8	11	4	1	1	
Washington, D. C.	2	5	5	12	6	1	5					
West Hoboken, N. J.	4	6	14	10								
Wilmington, Del.				3	6	5	15	9	6	1	1	

**POLIOMYELITIS (INFANTILE PARALYSIS)**--Continued.**Virginia Report for October, 1916.**

Place.	New cases reported.	Place.	New cases reported.
<b>Virginia:</b>		<b>Virginia--Continued.</b>	
Albemarle County.....	2	Northampton County.....	1
Augusta County.....	1	Pittsylvania County.....	3
Bedford County.....	1	Danville.....	1
Campbell County--		Roanoke County--	
Lynchburg.....	4	Roanoke.....	1
Caroline County.....	1	Rockbridge County.....	1
Carroll County.....	1	Rockingham County.....	1
Henrico County.....	1	Spottsylvania County.....	2
Richmond.....	6	Warwick County--	
Lee County.....	1	Newport News.....	1
Loudoun County.....	1	Washington County.....	1
Middlesex County.....	15		
Nansemond County.....	1	Total.....	48
Norfolk County--			
Portsmouth.....	1		

**Oregon Report for September, 1916.**

During the month of September, 1916, two cases of poliomyelitis were reported in Marion County and three cases in the city of Portland, Multnomah County, Oreg.

**City Reports for Week Ended Nov. 25, 1916.**

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Baltimore, Md.....	3	1	New Britain, Conn.....	1	
Boston, Mass.....	10	4	Newburyport, Mass.....	1	
Bridgeport, Conn.....	1	1	New York, N. Y.....	9	1
Cambridge, Mass.....	5	1	Philadelphia, Pa.....	2	3
Chicago, Ill.....	1	1	Providence, R. I.....	2	
Detroit, Mich.....	1	1	Quincy, Mass.....		1
Grand Rapids, Mich.....	1	1	Sacramento, Cal.....	1	
Jersey City, N. J.....	1		San Francisco, Cal.....	2	1
Kokomo, Ind.....		1	Sandusky, Ohio.....	1	
Lancaster, Pa.....	1		Springfield, Ill.....	1	
Lynchburg, Va.....		1	Springfield, Mass.....	1	
Lynn, Mass.....	1		Waltham, Mass.....	1	
Malden, Mass.....	1		Wilmington, Del.....	1	

**RABIES IN MAN.****City Report for Week Ended Nov. 25, 1916.**

During the week ended November 25, 1916, one fatal case of rabies in man was reported at Bayonne, N. J.

**RABIES IN ANIMALS.****City Reports for Week Ended Nov. 25, 1916.**

During the week ended November 25, 1916, three cases of rabies in animals were reported in Buffalo, N. Y., two cases in Detroit, Mich., one case in Kearny, N. J., and one case in St. Paul, Minn.

**SCARLET FEVER.**

See Diphtheria, measles, scarlet fever, and tuberculosis, page 3415.

**SMALLPOX.****California—Imperial County—Virulent Smallpox.**

The secretary of the State Board of Health of California reported by telegraph December 9, 1916, the occurrence of an outbreak of smallpox in Imperial County, Cal., 5 cases of the disease, with 3 deaths, having been notified among railroad section hands. The patients were Mexicans who had come from El Paso, Tex., and were reported never to have been successfully vaccinated.

**Connecticut.**

Collaborating Epidemiologist Black reported that during the week ended December 9, 1916, cases of smallpox were notified in Connecticut as follows: Naugatuck 1, Thomaston 2, Wallingford 1, Waterbury 16.

**Maine—Eastport—Vaccination of School Children.**

Acting Asst. Surg. Brooks submitted a report furnished by the superintendent of schools of Eastport, Me., in relation to vaccinations among school children in the city of Eastport as follows:

Schools.	Number of children—		
	Enrolled.	Vaccinated.	Unvaccinated.
Boynton High.....	156	44	122
Grammar.....	374	36	338
Primary.....	296	13	283
North End.....	61	3	58
South End.....	85	4	81
Out-Island.....	27	.....	27
Total.....	1,009	100	909

This shows that of all the children enrolled in the schools less than 10 per cent were vaccinated, and of those below the grammar grade less than 5 per cent were vaccinated.

**Massachusetts—Boston.**

Collaborating Epidemiologist Kelley reported by telegraph, December 9, 1916, that a case of smallpox had been notified at Boston, Mass., in the person of a Pullman-car cleaner who had never been vaccinated.

**Minnesota.**

Collaborating Epidemiologist Bracken reported that during the week ended December 9, 1916, four new foci of smallpox infection were reported in Minnesota, cases of the disease having been notified as follows: Chippewa County, Milan, 1; Lyon County, Westerheim Township, 4; Wilkin County, Kent, 1; Nordick Township, 3.



## SMALLPOX—Continued.

## Miscellaneous State Reports.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Oregon (Sept. 1-30):			Virginia (Oct. 1-31):		
Hood River County.....	2	.....	Frederick County.....	1	.....
Multnomah County—			Halifax County.....	6	.....
Portland.....	4	.....	Princess Anne County.....	1	.....
Total.....	6	.....	Total.....	8	.....

## City Reports for Week Ended Nov. 25, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Ann Arbor, Mich.....	1	.....	Little Rock, Ark.....	1	.....
Charleston, S. C.....	1	.....	Minneapolis, Minn.....	3	.....
Chicago, Ill.....	2	.....	Muscatine, Iowa.....	3	.....
Cleveland, Ohio.....	7	.....	New London, Conn.....	1	.....
Danville, Ill.....	20	.....	New Orleans, La.....	5	.....
Detroit, Mich.....	1	.....	Omaha, Nebr.....	2	.....
El Paso, Tex.....	9	.....	Portland, Ore.....	10	.....
Indianapolis, Ind.....	4	.....	St. Paul, Minn.....	2	.....
Kalamazoo, Mich.....	1	.....	Salt Lake City, Utah.....	2	.....
Kansas City, Mo.....	1	.....	Sioux City, Iowa.....	1	.....

## TETANUS.

## City Reports for Week Ended Nov. 25, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Chicago, Ill.....	2	2	New York, N. Y.....	1	1
Detroit, Mich.....	1	1	St. Louis, Mo.....	1	.....
New Orleans, La.....	1	1			

## TUBERCULOSIS.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 3415.

## TYPHOID FEVER.

## Virginia Report for October, 1916.

Place.	New cases reported.	Place.	New cases reported.
Virginia:		Virginia—Continued.	
Accomac County.....	20	Charlotte County.....	2
Albemarle County.....	2	Culpeper County.....	2
Charlottesville.....	2	Dickenson County.....	2
Alleghany County.....	4	Dinwiddie County.....	1
Amelia County.....	1	Petersburg.....	3
Amherst County.....	2	Elizabeth City County.....	1
Appomattox County.....	2	Essex County.....	1
Augusta County.....	13	Fauquier County.....	5
Bath County.....	3	Floyd County.....	2
Bedford County.....	6	Fluvanna County.....	1
Bland County.....	1	Franklin County.....	3
Botetourt County.....	1	Frederick County.....	26
Buchanan County.....	5	Giles County.....	2
Campbell County.....	11	Gloucester County.....	6
Lynchburg.....	12	Goochland County.....	7
Caroline County.....	2	Grayson County.....	2
Carroll County.....	6	Greene County.....	1
Clarke County.....	1	Greensville County.....	2

## TYPHOID FEVER—Continued.

## Virginia Report for October, 1916—Continued.

Place.	New cases reported.	Place.	New cases reported.
Virginia—Continued.		Virginia—Continued.	
Halifax County.....	8	Prince George County.....	1
Hanover County.....	1	Prince William County.....	1
Henrico County.....	5	Pulaski County.....	7
Richmond.....	13	Rappahannock County.....	1
Henry County.....	1	Richmond County.....	2
Isle of Wight County.....	1	Roanoke County.....	6
James City County.....	1	Roanoke.....	6
King and Queen County.....	3	Rockbridge County.....	4
King William County.....	1	Rockingham County.....	8
Lee County.....	14	Russell County.....	6
Loudoun County.....	3	Scott County.....	7
Louisa County.....	3	Shenandoah County.....	15
Lunenburg County.....	1	Smyth County.....	13
Madison County.....	2	Southampton County.....	5
Mathews County.....	3	Spotsylvania County.....	2
Mecklenburg County.....	4	Fredericksburg.....	1
Middlesex County.....	5	Stafford County.....	2
Montgomery County.....	11	Tazewell County.....	14
Nansemond County.....	1	Warren County.....	1
Nelson County.....	14	Warwick County.....	17
Norfolk County.....	3	Newport News.....	17
Portsmouth.....	1	Washington County.....	3
Northampton County.....	3	Westmoreland County.....	6
Northumberland County.....	23	Wise County.....	9
Orange County.....	1	Wythe County.....	2
Pittsylvania County.....	4	York County.....	2
Danville.....	5		
Prince Edward County.....	2	Total.....	456

## Oregon Report for September, 1916.

Place.	New cases reported.	Place.	New cases reported.
Oregon:		Oregon—Continue	
Clatsop County.....	2	Morrow County.....	4
Coos County.....	1	Multnomah County—	
Hood River County.....	1	Portland.....	5
Lake County.....	1	Umatilla County.....	2
Linn County.....	1		
Marion County.....	5	Total.....	22

## City Reports for Week Ended Nov. 25, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Atlantic City, N. J.....	4		Everett, Mass.....	2	
Baltimore, Md.....	13	1	Grand Rapids, Mich.....	5	
Bayonne, N. J.....		1	Harrisburg, Pa.....	3	
Binghamton, N. Y.....	1		Hartford, Conn.....	2	2
Birmingham, Ala.....	2	1	Hoboken, N. J.....	1	
Boston, Mass.....	5	1	Indianapolis, Ind.....	7	
Braddock, Pa.....	1		Johnstown, Pa.....		1
Brockton, Mass.....	1		Kalamazoo, Mich.....	5	
Buffalo, N. Y.....	3	1	Knoxville, Tenn.....	1	
Butler, Pa.....	1		Lancaster, Pa.....	1	
Charleston, S. C.....		1	Lawrence, Mass.....	2	
Chicago, Ill.....	13	1	Lexington, Ky.....		1
Cincinnati, Ohio.....	3		Lincoln, Nebr.....	1	
Columbus, Ohio.....	2		Los Angeles, Cal.....	2	1
Covington, Ky.....	1		Lowell, Mass.....	1	
Denver, Colo.....	4	2	Lynn, Mass.....	2	
Detroit, Mich.....	3	2	Minneapolis, Minn.....	4	
El Paso, Tex.....		1	Muscatine, Iowa.....	1	
Evansville, Ind.....	1		Nashville, Tenn.....	4	

## TYPHOID FEVER—Continued.

## City Reports for Week Ended Nov. 25, 1916—Continued.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
New Bedford, Mass.	1	.....	St. Paul, Minn.	1	.....
New Britain, Conn.	1	.....	Salt Lake City, Utah	3	.....
New Castle, Pa.	2	.....	San Diego, Cal.	1	.....
New Orleans, La.	6	3	San Francisco, Cal.	3	.....
New York, N. Y.	22	3	Schenectady, N. Y.	1	.....
North Adams, Mass.	1	1	South Bend, Ind.	.....	1
Northampton, Mass.	1	.....	Springfield, Mass.	4	.....
Oklahoma, Okla.	2	.....	Syracuse, N. Y.	1	1
Philadelphia, Pa.	8	1	Toledo, Ohio	3	2
Pittsburgh, Pa.	3	.....	Topeka, Kans.	1	.....
Portland, Me.	2	.....	Trenton, N. J.	1	.....
Portland, Oreg.	1	.....	Waltham, Mass.	1	.....
Providence, R. I.	1	.....	Washington, D. C.	1	1
Reading, Pa.	2	.....	Wilkes-Barre, Pa.	3	.....
Richmond, Va.	1	.....	Wilmington, Del.	1	2
Rochester, N. Y.	8	.....	Worcester, Mass.	1	.....
St. Joseph, Mo.	1	1	York, Pa.	1	.....
St. Louis, Mo.	30	4			

## TYPHUS FEVER.

## Texas—Laredo.

Acting Asst. Surg. Hamilton reported that during the week ended December 2, 1916, three cases of typhus fever were notified at Laredo, Tex., making a total of 7 cases reported since July 1, 1916.

## City Reports for Week Ended Nov. 25, 1916.

During the week ended November 25, 1916, one fatal case of typhus fever was reported at El Paso, Tex., and one case at New York, N. Y.

## PREVENTABLE DISEASES.

## Massachusetts Report for Week Ended Dec. 2, 1916.

	Cases reported.		Cases reported.
Cerebrospinal meningitis	1	Poliomyelitis (infantile paralysis)	15
Chicken pox	102	Scarlet fever	105
Diphtheria	160	Septic sore throat	2
Dysentery	1	Tetanus	1
German measles	9	Trachoma	2
Malaria	1	Tuberculosis (pulmonary)	134
Measles	249	Tuberculosis (other forms)	8
Mumps	61	Typhoid fever	14
Ophthalmia neonatorum	31	Whooping cough	46

## DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS.

## Virginia Report for October, 1916.

During the month of October, 1916, 501 cases of diphtheria, 377 cases of measles, and 258 cases of scarlet fever were reported in Virginia.

## DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Con.

## Oregon Report for September, 1916.

During the month of September, 1916, 5 cases of diphtheria, 51 cases of measles, and 24 cases of scarlet fever were reported in Oregon.

## City Reports for Week Ended Nov. 25, 1916.

City.	Popula- tion as of July 1, 1915 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Over 500,000 inhabitants:										
Baltimore, Md.	584,605	180	18		2		11		47	26
Boston, Mass.	745,139	263	35	5	8	1	25		64	25
Chicago, Ill.	2,447,045	622	230	23	67	1	161	6	278	52
Cleveland, Ohio.	656,975	175	61		31		11		36	
Detroit, Mich.	554,717	185	118	12	4		64		29	10
New York, N. Y.	5,468,190	1,445	153	12	31		70		371	169
Philadelphia, Pa.	1,683,664	476	56	5	14		33	1	96	64
Pittsburgh, Pa.	571,984	163	28	4	26		22	2	19	9
St. Louis, Mo.	745,988	221	64	4	10	1	39		47	25
From 300,000 to 500,000 inhab- itants:										
Buffalo, N. Y.	461,335	90	33		4	1	17	1	36	4
Cincinnati, Ohio.	406,706	130	46	4			6		32	13
Jersey City, N. J.	300,133	95	19		2		9		13	9
Los Angeles, Cal.	465,367	150	6	1	9		16		61	17
Milwaukee, Wis.	428,062	95	28	1	6		35	1	19	6
Minneapolis, Minn.	353,460		17		2		10			
New Orleans, La.	366,484		12	1	164	1	8		25	19
San Francisco, Cal.	416,912	149	30	2	20		18		31	19
Washington, D. C.	358,679	122	16	1	5		13		22	18
From 200,000 to 300,000 inhab- itants:										
Columbus, Ohio.	209,722	68	13	2	27	1	7		6	4
Denver, Colo.	253,161	75	2		14		2			18
Indianapolis, Ind.	265,578		33		11		10		7	
Kansas City, Mo.	289,879	80	9	4			9		8	8
Portland, Oreg.	272,833	45	2		19		25		10	5
Providence, R. I.	250,025	89	12	3	2		12	1		6
Rochester, N. Y.	250,747		5		2		18		9	
St. Paul, Minn.	241,999	44	7		1		4		2	3
From 100,000 to 200,000 inhab- itants:										
Birmingham, Ala.	174,108	48	4				6		6	3
Bridgeport, Conn.	118,434	43	15	1	3		2		11	3
Cambridge, Mass.	111,669	35	8		4		1		7	4
Camden, N. J.	104,349		5				1		2	
Fall River, Mass.	126,904	29	5		45		1		10	5
Grand Rapids, Mich.	125,739	34	1	1	1		19		9	
Hartford, Conn.	108,969	41	4	1	3		4		4	4
Lowell, Mass.	112,124	38	6	2	7		3		5	3
Lynn, Mass.	100,316	31	4				1		2	
Nashville, Tenn.	115,978	31	8		86		2		2	5
New Bedford, Mass.	114,694	23	2		6		5		5	4
New Haven, Conn.	147,095		10	1			2		4	1
Oakland, Cal.	190,803		2		1		5		5	
Omaha, Nebr.	135,455	44	3	1	1		5			4
Reading, Pa.	105,094	31	6		1		1		4	
Richmond, Va.	154,674	50	15		9		6		3	3
Salt Lake City, Utah.	113,567	32	4		310		19			3
Springfield, Mass.	103,216	34	6	1			5		1	
Syracuse, N. Y.	152,534	39	17				11		7	3
Tacoma, Wash.	108,094	10	2		195					
Toledo, Ohio.	187,840	66	8		1		39		36	9
Trenton, N. J.	109,212	37	6						9	5
Worcester, Mass.	100,523	48	4		25	1	7		9	4
From 50,000 to 100,000 inhab- itants:										
Atlantic City, N. J.	55,806	5	1		5				2	
Bayonne, N. J.	67,582		2				3		4	
Berkeley, Cal.	54,879	13	1				4		1	1
Binghamton, N. Y.	53,082	26	14	1	5		3		3	1
Brockton, Mass.	65,746	10	1		1		1		3	
Canton, Ohio.	59,869	12	6	1	1		1		1	
Charleston, S. C.	60,427	32	3				3			

<sup>1</sup> Population Apr. 15, 1910; no estimate made.

## DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Con.

City Reports for Week Ended Nov. 25, 1916—Continued.

City.	Popula- tion as of July 1, 1915 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
From 50,000 to 100,000 inhabit- ants—Continued.										
Covington, Ky.	56,520	11	3						1	2
Duluth, Minn.	91,913		2		2		9			
El Paso, Tex.	51,936	46	2	1						6
Erie, Pa.	73,798		2				3		4	27
Evansville, Ind.	72,125	27	11							3
Fort Worth, Tex.	99,528	22	1				1			1
Harrisburg, Pa.	70,754	20			1		1		2	2
Hoboken, N. J.	76,104	13	2	1			4		2	
Johnstown, Pa.	66,585	26	9		2		3		1	2
Kansas City, Kans.	96,854		5				2		6	1
Lancaster, Pa.	50,269		1							
Lawrence, Mass.	98,197	27	3		1		1		6	2
Little Rock, Ark.	55,158	17	1				2			
Malden, Mass.	50,067	15	4		1				1	2
Manchester, N. H.	76,959	21	2						1	1
Mobile, Ala.	56,536	12		1			3		2	1
New Britain, Conn.	52,203	1	1						1	1
Oklahoma, Okla.	88,158	10	3				1			
Passaic, N. J.	69,010	27	4				1		3	1
Pawtucket, R. I.	58,156	15		1			2			1
Portland, Me.	63,014	20	1		1					2
Sacramento, Cal.	64,806	31					2			1
St. Joseph, Mo.	83,974	16	5	1			1		1	
San Diego, Cal.	51,115	24			3		2		2	2
Schenectady, N. Y.	95,265	16	3		2	1	1		2	1
Sioux City, Iowa.	55,588		1							
Somerville, Mass.	85,460	20	4	1	1		1			3
South Bend, Ind.	67,030	13	1				7			1
Springfield, Ill.	59,468	14	16				3			2
Springfield, Ohio.	50,804	17					3		2	1
Troy, N. Y.	77,738		1		3		1		5	2
Wichita, Kans.	67,847								2	2
Wilkes-Barre, Pa.	75,218	10	3				6		2	
Wilmington, Del.	93,161	26	3				1			
York, Pa.	50,543		2		1				2	
From 25,000 to 50,000 inhabit- ants:										
Alameda, Cal.	27,031	5			1				1	
Bellingham, Wash.	31,609				3					
Brookline, Mass.	31,934	9	1						2	
Butler, Pa.	26,587	9	2		1					
Butte, Mont.	42,918	27	6	4			2		6	4
Chelsea, Mass.	32,452	16	1	1	2				3	2
Chicopee, Mass.	28,688	6	4				5			
Cumberland, Md.	25,564	3	1							1
Danville, Ill.	31,554	7							1	1
Dubuque, Iowa.	39,650				2				1	1
East Orange, N. J.	41,155	7					1			
Elgin, Ill.	27,844	3			1					
Everett, Mass.	38,307									2
Everett, Wash.	33,767	7					1		1	2
Fitchburg, Mass.	41,144	14	4						7	1
Galveston, Tex.	41,076	19	1	1			1			2
Haverhill, Mass.	47,774	14	2		1		2			
Jackson, Mich.	34,730	14	1				2			
Kalamazoo, Mich.	47,364	21					1		2	1
Kenosha, Wis.	30,319	13	1				2			2
Knoxville, Tenn.	38,300				3				2	
La Crosse, Wis.	31,522	5	2				1			1
Lexington, Ky.	39,703	19	4				1			3
Lincoln, Nebr.	46,028	10	2	2			1			
Long Beach, Cal.	26,012	10								
Lorain, Ohio.	35,662						1			
Lynchburg, Va.	32,383	10	1		9		1		1	1
Madison, Wis.	30,084	3								
Medford, Mass.	25,737	8	1						1	
Montclair, N. J.	25,550	6		1					1	
Newport, Ky.	31,722	9	2				2			
Newport, R. I.	29,631	5	13				2			1
Newton, Mass.	43,085	4								

<sup>1</sup> Population Apr. 15, 1910; no estimate made.



## DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Con.

City Reports for Week Ended Nov. 25, 1916—Continued.

City.	Popula- tion as of July 1, 1915 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.		
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	
From 25,000 to 50,000 inhabit- ants—Continued.											
Niagara Falls, N. Y.	36,240		4	1	7				2	2	
Norristown, Pa.	30,833	3	8								
Ogden, Utah	30,466	10			5		6				
Orange, N. J.	32,524	14	1				1		4	4	
Pasadena, Cal.	43,859	10							2		
Perth Amboy, N. J.	39,725		3						1		
Pittsfield, Mass.	37,580	12					4		1	1	
Portsmouth, Va.	38,610	10	2		2						
Quincy, Ill.	38,764	13	3	2						1	
Quincy, Mass.	37,251	8									
Racine, Wis.	45,507	16	1				1			1	
Roanoke, Va.	41,929	15	2				1		1	1	
Rock Island, Ill.	27,961	6	1		2		1				
San Jose, Cal.	37,994	9	1				1		3		
Steubenville, Ohio.	26,631	10	1								
Stockton, Cal.	34,508	9	13		44		1			1	
Superior, Wis.	45,285	5	1		1				3	1	
Taunton, Mass.	35,957	15		1			5		3	2	
Topeka, Kans.	47,914	7	2		9		1		2		
Waltham, Mass.	30,129	4	1						1	1	
Watertown, N. Y.	29,384	8	1		1					1	
West Hoboken, N. J.	41,893	10							3	2	
Wheeling, W. Va.	43,097	17	4		3		2		1	1	
Williamsport, Pa.	33,495		4				2				
Wilmington, N. C.	28,264	10	1		3					1	
Zanesville, Ohio.	30,406	12								1	
From 10,000 to 25,000 inhabit- ants:											
Ann Arbor, Mich.	14,979	6			1				2		
Braddock, Pa.	21,310	9	3	1					2		
Cairo, Ill.	15,593	10								2	
Clinton, Mass.	13,075	7								1	
Coffeyville, Kans.	16,765		3								
Concord, N. H.	22,480	4	2								
Galesburg, Ill.	23,923	7									
Harrison, N. J.	16,555		1						2		
Kearny, N. J.	22,753	6			1				2		
Kokomo, Ind.	20,312	4	8		32				2		
Long Branch, N. J.	15,057	3								1	
Morristown, N. J.	13,158	4	3								
Nanticoke, Pa.	22,441	5	1								
Newburyport, Mass.	15,195	5					1		1		
New London, Conn.	20,771	9	6						1	1	
North Adams, Mass.	22,019	8			4		3		1		
Northampton, Mass.	19,846	10							1	1	
Plainfield, N. J.	23,289	7					1				
Rutland, Vt.	14,624	7			35		1			1	
Sandusky, Ohio.	20,160	1	2		15						
Steelton, Pa.	15,337										
Wilkinsburg, Pa.	22,361	10							4		
Woburn, Mass.	15,862	6									

<sup>1</sup> Population Apr. 15, 1910; no estimate made.

## FOREIGN.

### CHINA.

#### Examination of Rats—Hongkong.

During the three weeks ended October 28, 1916, 7,077 rats were examined at Hongkong. No plague infection was found. The last plague-infected rat at Hongkong was found September 2, 1916.

#### Plague—Hongkong.

During the week ended October 14, 1916, a case of plague was notified at Hongkong.

#### Examination of Rats—Shanghai.

During the two weeks ended October 28, 1916, 662 rats were examined at Shanghai. No plague infection was found.

The last plague-infected rat at Shanghai was reported found during the week ended May 6, 1916.

### CUBA.

#### Communicable Diseases—Habana and Regla.

Communicable diseases have been notified at Habana and Regla as follows:

Disease.	Nov. 11-20, 1916.		Remaining under treatment Nov. 20, 1916.
	New cases.	Deaths.	
Leprosy.....	3	.....	250
Malaria.....	17	.....	22
Measles.....	8	.....	5
Paratyphoid fever.....	1	.....	7
Typhoid fever.....	9	4	39
Varicella.....	1	.....	1

### GREAT BRITAIN.

#### Examination of Rats—Hull.

During the two weeks ended November 18, 1916, 96 rats were examined at Hull. Of these, 32 rats were from dock warehouses and 64 from ships in dock. No plague infection was found.

#### Examination of Rats—Liverpool.

During the two weeks ended November 18, 1916, 332 rats were examined at Liverpool. No plague infection was found.

## GREECE.

## Plague—Piræus.

The occurrence of a case of plague was reported at Piræus December 9, 1916.

## PERSIA.

## Cholera.

From October 10 to 18, 1916, six cases of cholera were notified in Teheran and vicinity. Of these, three cases occurred in a military camp. On October 14 cholera was reported present with several cases at Enzeli and at Recht a fatal case was notified.

## UNION OF SOUTH AFRICA.

Further Relative to Plague—Cape of Good Hope.<sup>1</sup>

The outbreak of plague in Uitenhage district, State of Cape of Good Hope, reported October 19, 1916, occurred at Balmoral, a locality about 20 miles from Port Elizabeth. To October 25, 14 cases were notified.

## CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER.

Reports Received During the Week Ended Dec. 15, 1916.<sup>2</sup>

## CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
India:				
Bassein.....	Sept. 24-30.....		1	
Bombay.....	Oct. 15-28.....	4	11	
Karachi.....	Oct. 8-21.....	63	56	
Prome.....	Sept. 24-Oct. 7....		6	
Toungoo.....	do.....		5	
Java:				Aug. 5-Sept. 28, 1916: Cases, 165; deaths, 96.
East Java.....	Aug. 5-Sept. 8....	12	3	
Mid-Java.....	Aug. 5-25.....	14	10	
West Java.....	Aug. 18-Sept. 21..	139	83	
Batavia.....	Aug. 18-Sept. 28..	39	23	
Persia:				
Enzeli.....	Oct. 14.....			Present.
Recht.....	do.....	1	1	
Teheran.....	Oct. 10-18.....	6	5	Including suburbs and military camp.
Turkey in Asia:				
Tarsus.....	Oct. 8-14.....			Present.

## PLAGUE.

Brazil:				
Pernambuco, State—				
Garanhuns.....	Jan. 1-Mar. 31....			Present.
Do.....	Sept. 15-30.....			Present. Locality, inland town, 150 miles from Pernambuco city. Railway communication.
Ceylon:				
Colombo.....	Oct. 8-21.....	10	4	

<sup>1</sup> Public Health Reports, Dec. 8, 1916, p. 3373.

<sup>2</sup> From medical officers of the Public Health Service, American consuls, and other sources.

# **CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.**

## **Reports Received During the Week Ended Dec. 15, 1916—Continued.**

### **PLAGUE—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
<b>China:</b>				
Amoy.....	Oct. 8-21.....			Present in vicinity.
Hongkong.....	Oct. 8-14.....	1	1	
<b>Greece:</b>				
Piræus.....	Dec. 9.....	1		
<b>India:</b>				
Bombay.....	Oct. 15-28.....	29	23	Oct. 8-14, 1916: Cases, 7,564; deaths, 5,669.
Karachi.....	Oct. 22-28.....	1	1	
Madras Presidency.....	Oct. 15-21.....	360	242	
Rangoon.....	Oct. 8-21.....	20	19	
<b>Java:</b>				
East Java.....				July 29-Aug. 25, 1916: Cases, 27; deaths, 25.
Residencies—				
Kediri.....	July 29-Aug. 25.....	8	8	
Madison.....	July 29-Aug. 11.....	2	2	
Paseroean.....	Aug. 12-25.....	1	1	
Surabaya.....	July 29-Aug. 25.....	16	14	
<b>Straits Settlements:</b>				
Singapore.....	Oct. 8-14.....	2	2	
<b>Union of South Africa:</b>				
Cape of Good Hope—				
Balmoral.....	Oct. 19-25.....	14	4	Uitenhage district.

### **SMALLPOX.**

<b>Brazil:</b>				
Rio de Janeiro.....	Oct. 1-21.....	26	3	
<b>China:</b>				
Antung.....	Oct. 30-Nov. 5.....	2		Present. Do.
Chungking.....	Oct. 8-21.....			
Foochow.....	Oct. 1-21.....			
Harbin.....	Oct. 16-22.....	1		
Hongkong.....	Oct. 8-28.....	13	9	
<b>India:</b>				
Bombay.....	Oct. 15-21.....	4	3	
Madras.....	do.....	5	3	
Rangoon.....	Oct. 8-21.....	3	2	
<b>Java:</b>				
East Java.....	Aug. 5-Sept. 15.....	64	4	Aug. 5-Sept. 21, 1916: Cases, 436; deaths, 44.
Mid-Java.....	do.....	114	21	
West Java.....	Aug. 18-Sept. 28.....	258	19	
Batavia.....	Aug. 18-Sept. 21.....	1	1	
<b>Mexico:</b>				
Juarez.....	Nov. 26-Dec. 2.....	2		Total cases in hospital, 5.
Vera Cruz.....	Nov. 6-12.....		1	
<b>Portugal:</b>				
Lisbon.....	Nov. 5-11.....	4		
<b>Russia:</b>				
Petrograd.....	Oct. 1-7.....	11	5	
<b>Spain:</b>				
Madrid.....	Oct. 1-31.....		48	
<b>Straits Settlements:</b>				
Penang.....	Oct. 1-14.....	2	1	
Singapore.....	do.....	5	1	

### **TYPHUS FEVER.**

<b>Egypt:</b>				
Alexandria.....	Oct. 22-Nov. 4.....	11	3	
<b>Germany:</b>				
Bremen.....	Sept. 24-Oct. 14.....	3	1	In prison camp.
Frankfort, Government district.....	Oct. 22-28.....	1		
Königsberg.....	do.....	2	2	
<b>Greece:</b>				
Saloniki.....	Oct. 9-16.....		9	
<b>Italy:</b>				
Bari, Province—				
Andria.....	May 1-July 31.....	49	14	

**CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.****Reports Received During the Week Ended Dec. 15, 1916—Continued.****TYPHUS FEVER—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
Java.....				Aug. 5-Sept. 28, 1916: Cases, 115; deaths, 13.
East Java.....	Aug. 5-25.....	4	2	
Mid-Java.....	Aug. 5-Sept. 15....	40	6	
West Java.....	Aug. 18-Sept. 28....	71	5	
Batavia.....	.....do.....	52	3	
Mexico:				
Juarez.....	Nov. 26-Dec. 2....	3		Total in hospital, 7 cases.
Russia:				
Petrograd.....	Oct. 1-7.....	9	1	

**YELLOW FEVER.**

Barbados.....	Nov. 11-25.....	7	2	
---------------	-----------------	---	---	--

**Reports Received from July 1 to Dec. 8, 1916.****CHOLERA.**

Place.	Date.	Cases.	Deaths.	Remarks.
Austria-Hungary.....				Mar. 12-May 6, 1916: Cases, 425; deaths, 155.
Austria.....	Mar. 26-Apr. 8.....	2		
Do.....	July 9-15.....	1		
Bosnia-Herzegovina.....	Mar. 12-May 20.....	398	147	
Do.....	July 1-Aug. 15.....	33	7	
Croatia-Slavonia.....	Sept. 4-11.....	4	2	
Hungary.....	Mar. 20-Apr. 2.....	2		
Do.....	July 9-15.....	1		
Ceylon:				
Colombo.....	June 25-July 1....	1	1	May 7-20, 1916: Cases, 43; deaths, 5, from s. s. Hong Kheng from Haifong; total to June 1: Cases, 61; deaths, 37; May 28-June 10, 1916: Cases, 19, from the port.
China:				
Canton.....	Aug. 11-31.....		13	On s. s. Taihei Maru from Hong-kong and Chefoo.
Do.....	Sept. 11-20.....		2	
Dairen.....	Aug. 6-12.....		1	
Hongkong.....	Aug. 19-Sept. 2....	9	9	
Macao.....	Aug. 17.....			Present.
Shanghai.....	Aug. 20-26.....		2	Chinese.
Egypt:				
Suez.....	May 18-20.....	5	2	From s. s. Pei-ho from Bombay.
Tor, quarantine station....	May 22-June 3.....	112	42	Do.
Germany:				
Hanover.....	Aug. 28-Sept. 2....		1	
Greece:				
Moschopolis.....	July 25-31.....	15	8	
India:				
Akyab.....	June 11-July 8.....		2	
Bassein.....	Apr. 23-June 10....		3	
Bombay.....	May 14-July 1.....	21	9	
Do.....	July 2-Sept. 30....	159	105	
Calcutta.....	May 7-July 1.....		250	
Do.....	July 2-Sept. 23....		106	
Henzada.....	Apr. 23-July 22....		7	
Karachi.....	Aug. 28-Sept. 30....	150	139	
Madras.....	June 25-July 1.....	1	1	
Do.....	July 2-22.....	5	3	
Madura District.....	Aug. 28-Sept. 9....	6	2	
Mandalay.....	July 23-29.....		1	
Pakokku.....	July 2-8.....		1	
Pegu.....	June 4-10.....		1	
Rangoon.....	May 24-July 29....	13	9	
Do.....	July 1-Sept. 30....	3	2	
Indo-China.....				Dec. 1-31, 1915: Cases, 516; deaths, 395. Jan. 1-Mar. 31, 1916: Cases, 2,018; deaths, 1,100.
Provinces—				
Anam.....	Dec. 1-31.....	493	388	
Do.....	Jan. 1-Mar. 31....	1,753	1,024	



# **CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.**

**Reports Received from July 1 to Dec. 8, 1916—Continued.**

## **CHOLERA—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
<b>Indo-China—Continued.</b>				
Cambodia.....	Jan. 1-Feb. 29.....	11	10	
Cochin-China.....	Jan. 1-Mar. 31.....	10	4	
Tonkin.....	Dec. 1-31.....	17	7	
Do.....	Jan. 1-Mar. 31.....	244	62	
Saigon.....	May 1-July 2.....	162	74	
Do.....	July 3-Sept. 2.....	69	45	
<b>Japan:</b>				
Keelung.....	Sept. 24-Oct. 7.....			Present.
Kobe.....	Aug. 30-Nov. 5.....	412	170	Since Aug. 14, 1916: Cases, 433;
Nagasaki.....	Aug. 8-Oct. 22.....	330	164	deaths, 184.
Osaka.....	Aug. 30-Sept. 30.....	779	246	Aug. 13-Oct. 25, 1916: Cases, 928;
Taiwan Island.....	Sept. 24-Oct. 7.....	15	1	deaths, 543.
Yokohama.....	Aug. 15.....	6	5	55 cases, with 9 deaths in quaran-
				tine, from s. s. Hawaii Maru
				from Hongkong via ports.
Do.....	Sept. 4-Oct. 22.....	68	45	Total to Oct. 1, 1916: Cases, 63;
Suburbs of city.....	Aug. 14-20.....	8	4	deaths, 46.
Districts.....	Sept. 4-Oct. 22.....	86	56	Total to Oct. 1, 1916: Cases, 125;
				deaths, 85.
<b>Java:</b>				
Batavia.....	Apr. 13-June 29.....		89	East Java, Apr. 8-June 30, 1916:
Do.....	July 7-Sept. 14.....	20	13	Cases, 50; deaths, 35. July 1-
Malang.....	Apr. 8-14.....	2	2	Sept. 1: Cases, 16; deaths, 8.
Malang and Djombang.....	Apr. 28-May 5.....	2	2	Mid Java, June 3-30, 1916:
				Cases, 30; deaths, 26. July 1-
				Aug. 4: Cases, 78; deaths, 65.
				West Java, Apr. 3-June 29,
				1916: Cases, 661; deaths, 409.
				July 7-Sept. 14: Cases, 506;
				deaths, 365.
Surabaya residency.....	May 6-19.....	5	2	Including Malang, 2 cases, and
				Sidoarjo and Malang, 3 cases,
				with 2 deaths.
<b>Korea:</b>				
Chemulpo.....	Sept. 18.....	2		Sept. 23, 1916: In southern and
Fusan.....	Aug. 1-Sept. 2.....	2	1	central Korea, 168 cases. Aug.
				1-Oct. 8: Cases, 893.
<b>Persia:</b>				
Asterabad.....	June 10.....			Present, with 4 or 5 deaths daily.
Enzell.....	July 1-Aug. 31.....	7	5	
Foumen.....	May 9.....	3	2	Previously erroneously included
Ghazien.....	June 13.....	2	1	in cases at Recht.
Kazvin.....	July 1-Sept. 30.....	28	34	
Keredge.....	Sept. 1-30.....	4	4	
Mohammerah.....	June 12.....			Present.
Recht.....	July 1-Aug. 31.....	19	11	
Tabriz.....	Aug. 1-31.....		12	
Teheran.....	Aug. 1-Oct. 3.....	36	20	Including vicinity.
Urmiah.....	July 1-31.....	25		
<b>Philippine Islands:</b>				
Manila.....	May 14-July 1.....	36	25	
Do.....	Aug. 6-Oct. 31.....	646	349	Not previously reported: Cases,
				111; deaths, 12.
<b>Provinces—</b>				
Albay.....	July 2-Oct. 21.....	519	272	
Antique.....	Sept. 17-30.....	5	4	
Bataan.....	July 2-Oct. 21.....	141	107	
Batangas.....	July 30-Oct. 21.....	88	64	
Bulacan.....	June 18-July 1.....	17	4	
Do.....	July 2-Oct. 21.....	922	511	
Cagayan.....	June 25-July 1.....	2	1	
Do.....	July 2-8.....	2		
Camaringes.....	June 18-July 1.....	69	32	
Do.....	July 2-Oct. 21.....	1,036	660	
Capiz.....	Oct. 1-21.....	15	10	
Cavite.....	June 11-July 1.....	14	11	
Do.....	July 2-Oct. 21.....	89	66	
Cebu.....	Oct. 8-14.....	3	3	
Iloilo.....	Aug. 20-Oct. 21.....	2,676	1,084	
Laguna.....	May 21-July 1.....	31	20	
Do.....	July 2-Oct. 21.....	167	143	
Lanao.....	May 28-June 3.....	110	88	
Mindanao.....	July 16-Aug. 5.....	19	11	
Mindoro.....	May 21-27.....	7	7	
Do.....	Sept. 3-Oct. 21.....	14	4	
Misamis.....	July 16-Sept. 16.....	218	119	
Negros Occidental.....	Sept. 3-Oct. 21.....	554	348	
Nueva Ecija.....	Sept. 10-23.....	3	2	
Pampanga.....	July 9-Oct. 21.....	192	166	

# **CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.**

**Reports Received from July 1 to Dec. 8, 1916—Continued.**

## **CHOLERA—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
<b>Philippine Islands—Contd.</b>				
<b>Provinces—Continued.</b>				
Rizal.....	May 24-July 1.....	11	9	
Do.....	July 2-Oct. 21.....	525	299	
Romblon.....	June 18-July 1.....	68	39	
Do.....	July 9-Sept. 30.....	24	20	
Samar.....	Aug. 28-Oct. 7.....	45	37	
Sorsogon.....	Oct. 8-21.....	9	4	
Tayabas.....	June 10-24.....	11	8	
Do.....	Aug. 6-Oct. 7.....	3	2	
Zambales.....	Aug. 20-Oct. 21.....	100	32	
<b>Siam:</b>				
Bangkok.....	May 15-27.....	22	21	
Do.....	June 16-Aug. 12.....	5	5	
<b>Straits Settlements:</b>				
Singapore.....	May 27-June 24.....	8	3	
Do.....	Aug. 13-19.....	1	1	
<b>Turkey in Europe:</b>				
Constantinople.....	May 19-Sept. 13.....	166	80	Present among soldiers June 14
<b>Turkey in Asia.....</b>				
Adana.....	June 16-Sept. 10.....	145	74	July-Sept. 15, 1916: Cases, 1,210;
Aleppo.....	June 15-25.....	47	16	deaths, 1,178. Total, June 1-
Do.....	July 13-Sept. 3.....	30	11	Sept. 15, 1916: Cases, 9,155;
Bagdad.....	June 15-July 5.....	78	18	deaths, 4,737.
Do.....	July 12-Sept. 12.....	22	6	
Beirut.....	July 14-Aug. 4.....	47	25	
Damascus.....	June 16-July 3.....	77	50	
Jaffa.....	June 17-25.....	67	39	
Do.....	July 1-29.....	151	63	
Mersina.....	Aug. 6-Sept. 9.....	7	7	
Smyrna.....	June 15-28.....	22	13	Epidemic. Estimated number
Do.....	July 17-Aug. 5.....	5	5	cases daily, 50.
Trebizond.....	Aug. 6-Oct. 21.....	63	17	
<b>At sea:</b>				
Steamship Hong-Kieng.....	Apr. 27-May 9.....	17	14	En route from Haifong, Indo-
Steamship Pei-ho.....	Apr. 19-30.....	1	1	China, to Colombo.
Do.....	May 5-17.....	8	8	From Saigon, Indo-China, for Co-
				lombo.
				From Colombo for Suez.

## **PLAGUE.**

<b>Azores:</b>				
Terceira, island.....	Nov. 21.....			Present.
<b>Brazil:</b>				
Bahia.....	Oct. 15-28.....	2	2	
Pernambuco, State.....	Jan. 4-Mar. 31.....			Several cases.
<b>British East Africa:</b>				
Nairobi.....	Oct. 8.....	4		
Uganda.....				
Kampala.....	Oct. 12.....	3		
<b>Ceylon:</b>				
Colombo.....	Apr. 30-July 1.....	49	46	
Do.....	July 2-Sept. 23.....	67	63	
<b>Chile:</b>				
Mejillones.....	May 28-June 3.....	1		
Antofagasta.....	June 4-July 22.....	2		
<b>China:</b>				
Amoy.....	July 16-Oct. 2.....			Present in vicinity.
Canton.....	Aug. 1-10.....		3	
Hongkong.....	May 28-June 30.....	7	7	Mar. 19-25: Cases, 2; deaths, 2.
Do.....	July 23-Sept. 30.....	7	5	
<b>Ecuador:</b>				
Ambato.....	May 1-31.....			Epidemic.
Bahia.....	.....do.....			Country district, vicinity of
Daule.....	June 1-30.....	4	2	Bahia.
Guayaquil.....	May 1-June 30.....	10	3	
Do.....	July 1-Aug. 31.....	25	9	
Manta.....	May 1-31.....			
Santa Rosa.....	Aug. 1-31.....	1		Country district, vicinity of
				Manta.

# CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

## Reports Received from July 1 to Dec. 8, 1916—Continued.

### PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Egypt.....				Jan. 1-Oct. 5, 1916: Cases, 1,695; deaths, 821. Jan. 1-June 29, 1916: Cases, 1,634; deaths, 792. Imported.
Alexandria.....	May 26-Sept. 23.....	48	28	
Cairo.....	July 10-Oct. 4.....	2		
Port Said.....	May 7-June 28.....	11	10	
Do.....	July 20-Aug. 3.....	5	4	
Provinces—				
Assiout.....	May 27-June 29.....	9	8	
Beni Souef.....	May 26-June 25.....	34	15	
Do.....	July 1-10.....	2	1	
Fayoum.....	May 26-June 30.....	112	45	
Do.....	July 1-Aug. 3.....	9	2	
Galloubeh.....	June 7.....	1	1	
Girgeh.....	June 9-21.....	3	1	
Do.....	July 7-10.....	7	7	
Menoufieh.....	June 12-30.....	9	4	
Do.....	July 1-31.....	5	3	
Minieh.....	May 29-June 30.....	37	14	
Do.....	July 3-10.....	5	2	
Great Britain:				
Bristol.....	Aug. 18-31.....	3		
Hull.....	Aug. 19-31.....	2	1	
Liverpool.....	Sept. 22-Oct. 6.....	6	3	
Greece:				
Island of Chios—				
Mitylene.....	Sept. 29.....			Present.
Volo.....	do.....			Slight epidemic. Epidemic declared extinct Nov. 1, 1916.
India.....				May 7-Sept. 30, 1916: Cases, 41,312; deaths, 29,686. <sup>1</sup>
Bassein.....	Apr. 23-Sept. 23.....		256	
Bombay.....	May 14-July 1.....	290	264	
Do.....	July 2-Oct. 7.....	158	112	
Calcutta.....	May 7-July 1.....		14	
Benzada.....	Apr. 23-July 1.....		14	
Do.....	July 9-Aug. 5.....		5	
Karachi.....	May 14-July 1.....	72	61	
Do.....	July 2-Sept. 23.....	11	12	
Madras.....	Sept. 21-Oct. 7.....	3	2	
Madras Presidency.....	May 14-June 24.....	139	94	
Do.....	July 9-Oct. 7.....	2,612	1,707	
Mandalay.....	May 14-June 3.....		1	
Do.....	Sept. 3-9.....		1	
Moulmein.....	Apr. 23-June 10.....		37	
Do.....	July 2-Sept. 23.....		79	
Pakkoku.....	Sept. 10-16.....		1	
Pegu.....	June 11-July 15.....		3	
Prome.....	Apr. 23-May 20.....		1	
Do.....	July 2-Sept. 23.....		88	
Rangoon.....	Apr. 23-July 1.....	467	440	Apr. 16-22, 1916: Cases, 54; deaths, 52.
Do.....	July 2-Sept. 30.....	315	290	
Toungoo.....	June 25-July 1.....		2	
Do.....	July 9-Sept. 23.....		24	
Indo-China.....				Dec. 1-31, 1915: Cases, 90; deaths, 70. Jan. 1-Mar. 31, 1916: Cases, 290; deaths, 191.
Provinces—				
Anam.....	Dec. 1-31.....	36	20	
Do.....	Jan. 1-Mar. 31.....	131	93	
Cambodia.....	Dec. 1-31.....	27	36	
Do.....	Jan. 1-Feb. 29.....	77	71	
Cochin-China.....	Dec. 1-31.....	4	1	
Do.....	Jan. 1-Mar. 31.....	82	27	
Tonkin.....	Dec. 1-31.....	23	23	
Saigon.....	May 15-July 2.....	55	30	
Do.....	July 24-Sept. 17.....	17	7	
Java.....				July 1-Sept. 1, 1916: Cases, 47; deaths, 46.
Residences—				
Kediri.....	Apr. 9-May 19.....	18	18	
Do.....	July 1-Aug. 25.....	10	10	
Madloen.....	July 1-Aug. 25.....	2	2	
Paseroean.....	Apr. 9-June 30.....	13	12	
Do.....	July 1-Aug. 25.....	5	5	
Surabaya.....	Apr. 9-June 30.....	28	25	
Do.....	July 1-Aug. 25.....	28	26	
Surakarta.....	Apr. 9-June 30.....	15	24	

<sup>1</sup> Reports for weeks ended May 22 and 27, 1916, not received.

# **CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.**

**Reports Received from July 1 to Dec. 8, 1916—Continued.**

## **PLAGUE—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
Japan:				
Taiwan—				
Tamsui.....	July 15-Sept. 23....	3	3	17 miles from capital city. Present.
Yokkaichi.....	Oct. 19.....			
Mauritius.....	Apr. 15-June 21....	6	8	
Persia:				
Recht.....	May 2-19.....	20	14	
Siam:				
Bangkok.....	Apr. 30-July 1....	66	59	
Do.....	July 2-Sept. 30....	48	41	
Straits Settlements:				
Singapore.....	Apr. 30-July 1....	5	1	
Do.....	July 2-Sept. 23....	3	5	
Union of South Africa:				
Cape of Good Hope State—				
Uitenhage district.....	Oct. 19.....	7	4	
Orange Free State.....	Jan. 23-Mar. 26....	36	23	

## **SMALLPOX.**

Australia:					Aug. 4-Sept. 28, 1916: Cases, 16.
New South Wales.....					
Angledool.....	July 21-Aug. 3.....	1			
Burren Junction.....	Sept. 1-15.....	1			
Guildford.....	June 9-22.....	2			
Lake Macquarie.....	Aug. 4-17.....	2			
Narrabri.....	May 26-June 7.....	8			
Do.....	July 7-Aug. 31.....	26			
Swansea.....	Aug. 4-16.....	1			
Sydney.....	June 23-30.....	1			
Do.....	July 1-Aug. 3.....	4			
Tamworth.....	June 9-22.....	1			
Do.....	July 7-20.....	1			
Walgett.....	July 21-Sept. 28....	11			
Austria-Hungary:					
Austria.....					Feb. 13-July 1, 1916: Cases, 2,241; July 2-22, 1916: Cases, 175.
Galicia, Province.....	Apr. 23-July 1.....	495			
Do.....	July 2-22.....	88			Other Provinces, same period: Cases, 35. Other Provinces, same period Cases, 87.
Prague.....	July 2-Sept. 9.....	6	2		
Vienna.....	May 27-July 1.....	4	1		
Do.....	July 9-Aug. 5.....	3			
Hungary—					
Budapest.....	May 21-July 1.....	38	15		
Do.....	July 2-Oct. 7.....	2	1		
Brazil:					
Bahia.....	July 2-Oct. 28.....	25	19		
Para.....	July 2-8.....		4		
Rio de Janeiro.....	Apr. 9-June 17.....	91	18		
Do.....	July 9-Sept. 30.....	142	31		
Santos.....	May 8-14.....	1			
British East Africa:					
Mombassa.....	Apr. 24-May 31....	4	2		
Do.....	July 1-31.....		1		
Canada:					
Ontario—					
Fort William and Port Arthur.....	July 9-15.....	1			
Niagara Falls.....	July 2-8.....	1			
Toronto.....	June 25-July 29....	3			
Ceylon:					
Colombo.....	May 7-June 3.....	4			
China:					
Amoy.....	Aug. 13-Sept. 30....				Present in vicinity.
Antung.....	May 22-June 18....	2	1		
Canton.....	Aug. 1-10.....		1		
Chinking.....	May 7-June 24.....				
Do.....	July 2-Oct. 7.....				Present.
Dairen.....	May 21-July 1.....	2	1		Do.
Do.....	July 16-Oct. 14....	4	2		Dec. 4: Prevalent.
Foochow.....	May 7-27.....				Present.
Do.....	July 2-Sept. 16....				Do.

# **CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.**

**Reports Received from July 1 to Dec. 8, 1916—Continued.**

## **SMALLPOX—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
China—Continued.				
Harbin.....	May 2-June 18.....	3	1	
Do.....	July 9-Sept. 10.....	5	2	
Hongkong.....	May 7-June 24.....	68	50	Mar. 19-25: Cases, 16; deaths, 13.
Do.....	July 28-Oct. 7.....	35	30	
Nanking.....	June 11-Aug. 19.....	45	11	Do.
Tientsin.....	May 14-July 1.....	4	1	
Do.....	July 2-Sept. 9.....	4	1	
Cuba:				
Cienfuegos.....	Sept. 21-30.....	2		
Egypt:				
Alexandria.....	May 28-June 17.....	4	2	
Cairo.....	Jan. 22-June 10.....	206	74	
Port Said.....	Mar. 12-June 3.....	7	7	
France:				
Paris.....	May 14-July 1.....	9		
Do.....	July 2-8.....	1		
Germany:				
Breslau.....	May 21-27.....	1		
Hamburg.....	June 11-17.....	1		
Königsberg.....	July 2-Sept. 2.....	4		
Schleswig, district.....	Sept. 24-Oct. 14.....	4		Allenstein, 1; Meldorf, 1.
Great Britain:				
Cardiff.....	June 4-17.....	1	1	
London.....	do.....	1		
Southampton.....	July 31-Aug. 5.....	1		
Greece:				
Athens.....	Apr. 1-June 13.....	178	37	
Do.....	July 9-10.....			Present.
Hawaii:				
Honolulu.....	Nov. 23.....	1		From s. s. Shinyomaru from Yokohama.
India:				
Bassein.....	May 7-June 10.....		2	
Bombay.....	May 14-July 1.....	153	79	
Do.....	July 2-Sept. 30.....	59	37	
Calcutta.....	May 7-June 3.....		3	
Do.....	July 2-Aug. 5.....		2	
Karachi.....	Aug. 6-Sept. 2.....	5	4	
Madras.....	May 14-July 1.....	139	42	
Do.....	July 2-Oct. 7.....	122	57	
Rangoon.....	Apr. 23-July 1.....	260	135	
Do.....	July 2-Sept. 30.....	20	6	
Indo-China:				
Provinces—				Dec. 1-31, 1915: Cases, 74; deaths, 14. Jan. 1-Mar. 31, 1916: Cases, 399; deaths, 27.
Anam.....	Dec. 1-31.....	48		
Do.....	Jan. 1-Mar. 31.....	68	5	
Cambodia.....	Dec. 1-31.....	19	13	
Do.....	Jan. 1-Mar. 31.....	38	14	
Cochin China.....	Dec. 1-31.....	1	1	
Do.....	Feb. 1-Mar. 31.....	23	2	
Tonkin.....	Dec. 1-31.....	6	6	
Do.....	Jan. 1-Mar. 31.....	270		
Saigon.....	July 24-Oct. 1.....	10	5	
Japan:				
Kobe.....	May 29-June 25.....	24	4	
Do.....	July 24-Sept. 3.....	11	2	
Nagasaki.....	June 26-July 2.....	1	1	
Java:				
Batavia.....	Apr. 13-June 29.....	31	9	East Java, Apr. 8-June 30, 1916: Cases, 88; deaths, 11. July 1-Sept. 1: Cases, 45; death, 1.
Do.....	June 30-July 13.....	6	4	Mid-Java, Apr. 1-June 30, 1916: Cases, 233; deaths, 47. July 1-Sept. 1: Cases, 75; deaths, 19.
Samarang.....	May 13-19.....	2	2	West Java, Apr. 13-June 29: Cases, 278; deaths, 59. June 30-Sept. 14: Cases, 300; deaths, 38.
Do.....	Aug. 26-Sept. 1.....	4	1	
Surabaya.....	May 9-June 16.....	2	1	
Malta.....	Apr. 1-30.....	7	1	
Mexico:				
Agua Calientes.....	June 12-July 2.....		33	
Do.....	July 3-Oct. 1.....		44	
Federal District.....	Oct. 15-21.....	8		
Frontera.....	May 28-June 10.....	4	1	
Guadalajara.....	June 11-17.....	35	9	
Laguna del Carmen.....	Oct. 10.....	30		

# **CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.**

**Reports Received from July 1 to Dec. 8, 1916—Continued.**

## **SMALLPOX—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
<b>Mexico—Continued.</b>				
Maratlan.....	May 31-June 6.....	.....	4	175 miles south of Frontera: Epi- demic among troops.
Mexico City.....	Aug. 28-Nov. 4.....	87	.....	
Tenosique.....	June 14.....	.....	.....	
Vera Cruz.....	June 4-July 2.....	.....	9	
Do.....	July 3-Sept. 3.....	.....	4	
Netherlands:				
Amsterdam.....	May 28-June 3.....	1	.....	
Philippine Islands:				
Manila.....	.....do.....	1	.....	
Do.....	July 1-8.....	3	.....	
Porto Rico:				
Aguas Buenas.....	June 19-25.....	5	.....	June 19-25, 1916: Cases, 33.
Arecibo.....	.....do.....	2	.....	
Do.....	Aug. 7-13.....	1	.....	
Bayamon.....	June 19-July 2.....	2	.....	
Naranjito.....	June 26-July 2.....	4	.....	
Rio Piedras.....	.....do.....	1	.....	
San Juan.....	.....do.....	24	.....	
Toa Alta.....	.....do.....	12	.....	
Portugal:				
Lisbon.....	May 21-July 1.....	15	.....	
Do.....	July 9-Oct. 28.....	13	.....	
Russia:				
Moscow.....	Apr. 30-July 1.....	222	59	
Do.....	July 2-Oct. 7.....	101	151	
Petrograd.....	Apr. 23-July 1.....	162	35	
Do.....	July 2-Sept. 28.....	77	18	
Riga.....	Apr. 6-May 31.....	1	1	
Do.....	July 1-22.....	2	.....	Apr. 1-30, 1916: 1 case.
Do.....				June 1-30, 1916: 1 case.
Siam:				
Bangkok.....	May 21-30.....	2	.....	
Spain:				
Cadiz.....	July 1-31.....	.....	1	June 1-30, 1916: Cases, 10.
Madrid.....	May 1-31.....	.....	13	
Do.....	July 1-Sept. 30.....	.....	60	
Malaga.....	May 1-31.....	.....	7	
Seville.....	May 1-June 30.....	.....	5	
Do.....	Aug. 1-Sept. 30.....	.....	19	
Valencia.....	May 21-July 1.....	12	4	
Do.....	July 8-Oct. 21.....	10	.....	
Straits Settlements:				
Penang.....	May 14-20.....	3	.....	
Singapore.....	Apr. 30-July 1.....	5	3	
Do.....	July 16-Sept. 16.....	6	2	
Switzerland:				
Basel.....	May 13-July 1.....	29	.....	
Do.....	July 2-Sept. 30.....	14	.....	
Turkey in Asia:				
Trebizond.....	Sept. 17-23.....	1	.....	
Union of South Africa:				
Durban.....	June 1-30.....	1	.....	
Johannesburg.....	May 28-July 1.....	3	.....	
Do.....	July 2-Sept. 9.....	15	.....	
Venezuela:				
Maracaibo.....	Sept. 2-22.....	.....	3	
Zanzibar:				
Zanzibar.....	May 12.....	1	.....	From s. s. Dilmara.
At sea:				
Steamship Katuna.....				Case of smallpox landed at Colombo, Ceylon, May 12, 1916. Vessel arrived May 27 at Fre- mantle, Australia, was ordered to quarantine, and proceeded to Melbourne direct for disin- fection.



# **CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.**

**Reports Received from July 1 to Dec. 8, 1916—Continued.**

## **TYPHUS FEVER.**

Place.	Date.	Cases.	Deaths.	Remarks.
<b>Austria-Hungary:</b>				
Austria:				
Galicia, province:	Apr. 22-July 1.	1,457		Feb. 13-July 1, 1916: Cases, 2,173. July 2-22, 1916: Cases, 513.
Do.	July 2-22.	419		
Vienna:	July 2-15.	3		
Bosnia-Herzegovina:	June 18-30.	21		
Do.	July 1-7.	4		
Hungary:				
Budapest:	May 21-June 24.	14		Feb. 21-Mar. 5, 1916: Cases, 33; deaths, 7.
Do.	July 2-Sept. 16.	7	1	
Belgium:				
Liege:	Aug. 12-19.		1	
Canada:				
New Brunswick— St. John:	July 29.	4		
Canary Islands:				
Santa Cruz de Tenerife:	July 31-Aug. 5.		1	
China:				
Antung:	June 19-25.	1	1	
Do.	July 22-Sept. 10.	4		
Harbin:	May 2-8.	1		
Do.	July 3-16.	1		
Tientsin:	May 14-20.		1	
Egypt:				
Alexandria:	May 21-July 1.	235	93	
Do.	July 2-Oct. 7.	170	75	
Cairo:	Jan. 8-June 10.	1,124	307	
Port Said:	Mar. 18-June 10.	52	26	
Germany:				
Aix la Chapelle:	July 2-Oct. 7.		3	
Barmen:	Aug. 13-19.		1	
Berlin:	June 18-24.		1	
Do.	July 16-Oct. 30.		15	
Bremen:	July 16-Sept. 2.	12	2	
Breslau:	Aug. 15-Oct. 30.	4		
Chemnitz:	May 28-June 3.		1	
Frankfort on the Main:	June 11-17.		1	
Do.	Aug. 27-Sept. 2.		1	
Hanover:	May 7-27.	4	1	
Do.	July 1-Sept. 30.	7	3	
Königsberg:	June 4-10.	1		
Do.	July 9-Oct. 21.	18	6	
Leipzig:	June 4-10.		1	
Stettin:	July 16-Aug. 19.		3	
Great Britain:				
Belfast:	July 16-Sept. 9.	12	4	
Dublin:	Oct. 1-14.	3		
Dundee:	Oct. 8-14.	1	1	
Glasgow:	July 9-Oct. 21.	10	7	
Liverpool:	Oct. 29-Nov. 4.	1	1	
Greece:				
Athens:	July 24-Aug. 21.		2	
Saloniki:	May 1-July 2.		61	
Do.	July 3-Oct. 2.		177	
Italy:				
Palermo:	June 29-July 5.	1	1	
Jamaica:				
Port Antonio:	Oct. 22-28.	1	1	
Japan:				
Hakodate:	July 16-22.	2		
Tokyo:	May 22-July 23.	114		
Java:				
Batavia:	Apr. 13-June 29.	46	13	Jan. 1-July 25, 1916: Cases, 468. East Java, Apr. 8-June 30, 1916: Cases, 24; deaths, 9. July 22- Aug. 4 Case, 1. Mid-Java, Apr. 1-June 30, 1916: Cases, 76; deaths, 18. July 1-Aug. 4: Cases, 25; deaths, 4. West Java, Apr. 13-June 29, 1916: Cases, 118; deaths, 18. July 7-Aug. 17: Cases, 37; deaths, 7.
Do.	July 7-27.	21	4	
Samarang:	Apr. 1-June 30.	20	8	
Surabaya:	Apr. 8-May 12.	6	6	
Do.	July 1-7.	1		
Mexico:				
Aguascalientes:	June 12-July 2.		32	
Do.	July 3-Oct. 1.		181	
Chihuahua:	Sept. 7.	40		Sept. 20: Estimated number of cases, 100. Oct. 31: Epidemic. Present.
Durango:	Sept. 1.			

# **CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.**

**Reports Received from July 1 to Dec. 8, 1916—Continued.**

## **TYPHUS FEVER—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
<b>Mexico—Continued.</b>				
Federal District.....	Oct. 15-21.....	334		
Juarez.....	Sept. 7-20.....	18		
Guadalajara.....	June 11-17.....	4	1	
Leon.....	Oct. 25.....			Present.
Mexico City.....	Aug. 28-Nov. 4.....	2,380		
Nuevo Laredo.....	Oct. 28.....	1		In person from Guanajuato.
San Luis Potosi.....	Oct. 21.....			Epidemic.
Tampico.....	Oct. 11-30.....		1	
Torreon.....	Oct. 20.....			Present.
Vera Cruz.....	June 4-9.....		2	
Do.....	July 24-Oct. 15.....		9	
Zacatecas, State.....				Sept. 7-Oct. 25: Prevalent.
Netherlands:				
Rotterdam.....	July 30-Oct. 14.....		1	
Norway:				
Bergen.....	do.....		1	
Russia:				
Moscow.....	Apr. 30-July 1.....	909	52	
Do.....	July 9-Oct. 7.....	361	38	
Petrograd.....	Apr. 23-July 1.....	59	13	
Do.....	July 3-Sept. 30.....	42	7	
Riga.....				June 1-30, 1916: 1 case.
Spain:				
Madrid.....	Aug. 1-Sept. 30.....		2	
Sweden:				
Stockholm.....	June 21-27.....	1		
Do.....	July 9-Oct. 7.....	9		
Switzerland:				
Basel.....	July 24-Aug. 26.....	8		
Geneva.....	May 21-27.....	1		
St. Gall.....	Oct. 15-21.....	1		
Zurich.....	July 23-Sept. 2.....	5		
Turkey in Asia:				
Adana.....	May 13-June 25.....			Present.
Do.....	July 2-8.....			Do.
Bagdad.....	June 27.....			Do.
Haifa.....	Apr. 24-June 11.....	35	13	
Do.....	July 10-Oct. 1.....	98	43	
Jaffa.....	Apr. 23-June 25.....		47	Mar. 19-Apr. 1: Present.
Mersina.....	May 7-June 25.....	9		Apr. 2-8: Cases, 3.
Do.....	July 2-8.....			Do.
Tarsus.....	May 13-27.....			Present.
Do.....	July 2-8.....			Do.
Trebizond.....	Aug. 6-Sept. 30.....	3	3	

## **YELLOW FEVER.**

Barbados.....	Sept. 17-30.....	6	5	Nov. 25, present.
Ecuador:				
Babahoyo.....	June 1-30.....	2		
Guayaquil.....	May 1-June 30.....	76	51	
Do.....	July 1-Aug. 31.....	73	44	
Milagro.....	June 1-30.....	1	1	
Do.....	July 1-Aug. 31.....	3	1	
Naranjito.....	Aug. 1-31.....	2	1	
Martinique:				
Fort de France.....	Oct. 22-28.....	1	1	
Mexico:				
Campeche.....	Sept. 15.....	1	1	
Merida.....	July 1-Oct. 28.....	30	9	
Progreso.....	Aug. 13-Oct. 21.....	2	1	
Tuxpan.....	Oct. 31.....			Present.

# SANITARY LEGISLATION.

## COURT DECISIONS.

### KENTUCKY COURT OF APPEALS.

#### **Sewage Disposal—Pollution of Streams—Damages Awarded Against City—Injunction.**

**CITY OF PRINCETON v. POOL.** (Oct. 24, 1916.)

Damages can be recovered against a city for discharging its sewage into a stream so as to pollute the water of the stream and injure lower property owners.

Under the Kentucky statute limiting the time within which suits must be brought, recovery can be had for such injuries sustained within five years before the institution of the suit.

When the natural surface drainage rendered the water of the stream unfit for use before the city discharged its sewage into the stream, damages could not be recovered against the city on the ground that the water could not be used after sewers were constructed.

A city discharged its sewage into a stream, polluting the water, causing annoyance to residents, and lessening the value of property below the city. The stream was the natural outlet for the sewage of the city, and the evidence showed that it was possible to discharge the sewage into the stream in such a manner as not materially to injure the value of the land of the plaintiff. The court reversed a decree which prohibited the city from using the stream to carry off its sewage, but intimated that an injunction restraining the city from creating a nuisance would have been proper under the circumstances.

[188 Southwestern Reporter, 758.]

CLARKE, J.: The ground upon which the city of Princeton, in Caldwell County, is built is supported by cavernous limestone. A large creek runs through and under the city. This creek, in a natural depression or sink hole, known as Cave Spring, in the northwestern part of the city, enters the ground and in a subterranean channel passes under a portion of the city for a distance of about 2,500 feet, when it again comes to the surface at a place known as the Big Spring, in the southeastern part of the city, from which place it continues on top of the ground in a well-defined channel through and out of the city. The underground channel is sufficiently large to carry the waters of the creek during flood times, and in addition the surface of about 73 acres of a thickly populated portion of the city drains naturally into it at the Cave Spring. For a long time the waters of this stream, where it comes to the surface at Big Spring, furnished the principal water supply to the population of the city. As the city grew and covered the territory which drains into the stream at the Cave Spring, the water of the stream became so polluted as to render it unfit for domestic use. That the waters of the stream had become unfit for such use prior to 1907 is conclusively shown by the testimony in this case.

In 1907 the city of Princeton, pursuant to ordinance, constructed a system of sewers which it connected with the subterranean portion of this stream in such a way as to discharge the sewage from the city into the stream to be carried off by it. The place where this stream comes again to the surface, known as the Big Spring, is almost back of, but slightly above, the property of appellee, and the waters of the stream pass over or along the edge of appellee's lot. This lot faces upon Main Street, one of the principal streets of the city, and is less than 200 feet from Court Square, upon which is located the county courthouse, and is much higher in the front at the street than in the rear at the stream.

On February 13, 1915, appellee instituted this action against the city to recover damages for the pollution of the waters of the stream, claiming that such pollution deprived him of his customary and rightful use of such water, and for damages to the use, occupancy, and rental value of his property, asserting that the discharge of the sewage of the city into the creek back of his premises not only rendered the waters of the stream unfit for use, but contaminated the air to such a degree as to injure the use and rental value of his property. He also asked an injunction to abate the nuisance alleged to result from this use of the stream by the city.

The city traversed the allegations of the petition and plead affirmatively the necessity of a sewerage system; that the stream furnished the only means of disposing of the city sewage; that the sewerage system as constructed was a permanent structure; and that appellee's cause of action was barred by the five-year statute of limitations.

Upon the issues joined and the proof the chancellor adjudged that the discharge of the city sewage into the subterranean channel of the stream was a nuisance and should be abated, and enjoined the city from discharging the sewage into the stream, and to abate the nuisance by disconnecting the sewers with the subterranean channel within six months. He then transferred the case to the common-law docket, and submitted the question of damages incurred by appellee within five years before the filing of the petition to a jury, which returned a verdict upon that issue for appellee in the sum of \$2,500.

To reverse the judgment of the chancellor enjoining the abatement of the nuisance by disconnecting the sewers with the subterranean channel, and the judgment on the verdict of the jury for damages, this appeal is prosecuted.

1. It is urged, first, that the chancellor erred in declaring the discharge of the sewage into the stream a nuisance and ordering its abatement; that in any event the chancellor erred in fixing the manner of abatement, even if a nuisance was found to exist.

Appellee's remedy for injuries sustained from the construction and maintenance of the sewerage system, as well as the extent of the power of the chancellor to regulate same by injunction, depends upon whether or not, in any case, the injury complained of necessarily results from the construction of sewers or from the manner in which they were maintained and operated.

Before proceeding to discuss the propositions of law presented, it will be profitable, in order that we may properly confine the law propositions involved here, to first state our conclusions of fact upon the evidence.

The proof is conclusive that the filth dumped from the sewers into the underground channel of the stream was deposited along the banks and in the bed of the stream upon and near appellee's property in such a manner that the atmosphere about his property was so contaminated as to limit and render its use and occupancy extremely disagreeable and dangerous to the health of the occupants, especially in dry seasons when the water in the stream was low and sluggish; that, in addition to the disagreeable and dangerous odors emanating from these deposits, a condition was created in which mosquitoes and other disease-bearing insects and germs were produced, all of which interfered with and injured the use and rental value of appellee's property; that this condition resulted from the continuous and recurrent acts of the city; that a public nuisance was thereby created by the city in the immediate vicinity of appellee's property from which he sustained a personal injury over and above that sustained by the general public. As to whether the condition from which the damage to appellee's property results necessarily arises from the construction of the sewers as permanent structures, or from the avoidable manner in which the sewers are maintained and operated by the city, there is some room for disagreement, as is nearly always the case. We are of the opinion, however, that upon the evidence here this condition is satisfactorily shown to result from the manner in which the sewerage system is maintained and operated rather than from the permanency of the structure; that the nuisance can be abated by the city with comparative ease at a moderate expense and with the result that the

city will not be deprived of the reasonable and necessary use of its permanently constructed sewerage system, and that appellee may enjoy the use and occupancy of his property free from injury from that system.

Princeton is a city of the fourth class, and by its charter empowered to make all regulations necessary to secure the general health of the inhabitants of the city and to construct sewers, so that there can be no question but that for such a city a sewerage system is a public necessity, to construct and maintain which ample power is conferred upon the city, if, in fact, the duty is not imposed by section 3490 of the Kentucky statutes.

In an amended answer the city pleaded that this stream offered the only practical means of drainage for a city sewerage system, which is not denied by appellee.

It therefore results that the sewerage system involved here is a permanent structure and a public necessity, constructed under valid legislative authority, but that the nuisance of which appellee complains as a result thereof does not necessarily result therefrom, but results from the avoidable manner in which the sewerage system is maintained and operated by the city. This being the case, it is not necessary for us to decide here whether an injunction would lie to force the city to disconnect its sewers with the stream, a question upon which there is no decision in this court and about which there is much conflict in the decisions of other jurisdictions. The only question presented here is whether or not the chancellor has the power to abate a nuisance which results, not necessarily from the permanency of the structure, but from the avoidable manner in which the sewers are maintained and operated. That he has such power under such circumstances is not open to doubt.

The chancellor, however, in the mandatory injunction which he granted ordered the city to disconnect its sewers with the underground channel, thereby depriving the city of the right to empty its sewage into the stream, which was a practical denial of the city's right to maintain sewers at all, since it stands confessed upon the pleadings that this stream affords the city the only practical means for that purpose. This was neither reasonable nor necessary under the proof here, which, as we have before stated, shows that the nuisance complained of by appellee resulted from the manner in which the city operated its sewerage system in permitting filth to accumulate upon the banks and in the bed of the stream upon appellee's property within the city, near a public street, and within about 200 feet of the courthouse square. Whether this nuisance can be successfully avoided by improving the drainage below the Big Spring, by an extension of a subterranean channel through an artificial sewer beyond the city limits, by some kind of disposal plant to be erected by the city, or otherwise, should have been left to the discretion of the city, to be exercised by it at the risk of subsequent liability to appellee if inadequately or improperly done. The injunction should have been directed to the discharge and accumulation of the contents of the sewers upon and near appellee's property in such a manner as to create a nuisance there, which would have safeguarded every right of appellee in his property, and which was the only question before the court in this case, and should not have precluded all use of this stream, the only available means to the city, in the disposal of the city sewage, as the evidence does not show that the nuisance near appellee's property necessarily resulted from such use, and no nuisance was shown at any other place.

The city offered an amended answer, alleging that it had abated the nuisance by drainage since the action was filed, but the court sustained appellee's objection to its being filed, to which ruling of the court appellant excepted at the time and now complains. This amended answer, while not a defense to the damages theretofore sustained by appellee, presented a defense, if true, to an injunction and should have been filed.



2. As will be seen from what we have heretofore said, the damages sustained by appellee were avoidable and resulted from the manner in which the sewerage system was maintained and operated and were therefore temporary in their character. The nuisance from which these damages resulted was a continuing nuisance against which the statute of limitations did not run, except for such damages as had occurred five years before the institution of the action. The determination of the damage sustained within that period was properly referred to a jury, and the court did not err in transferring the case to the ordinary docket for that purpose.

Appellant's objection to the verdict of the jury are largely directed to the action of the court in fixing as the measure of damages the temporary, rather than the permanent, injury to appellee's property; but, as we have seen, in this the court was correct. *City of Georgetown v. Kelly* (123 S. W., 251); *City of Henderson v. Robinson* (152 Ky., 245, 153; S. W., 224); *City of Henderson v. Herron* (152 Ky., 341, 153 S. W., 440).

Some objection is also made that the damages awarded are excessive. While the proof is not without conflict as to the extent of the injury to appellee's property, the proof shows satisfactorily that upon his lot appellee has three storerooms fronting Main Street, used for business purposes, with rooms above, some of which he uses as a residence for himself and family, a basement under the whole of the building used in connection with the storerooms, a large frame warehouse, and a small dwelling upon the rear of the lot; and that the use, occupancy, and rental value of all of these buildings were materially injured during the whole of the five years covered by the finding of the jury, and during dry seasons the entire property was rendered almost unfit and unsafe for use. This being the case, we are unable to say from the evidence that \$2,500 is in excess of the real injury sustained by appellee. It is certainly not so excessive as to indicate passion or prejudice in the finding, as must be the case under the code before a reversal can be ordered.

All question of any damage to appellee by reason of his having been deprived of the use of the water from the stream by the pollution thereof from the city sewage is eliminated by the evidence which conclusively shows that the water of the stream had been rendered unfit for such use long before the city turned the sewage into it by the natural surface drainage from a large and thickly populated portion of the city.

For the reasons indicated, the judgment upon the verdict of the jury for damages is affirmed, and the judgment of the chancellor granting the injunction is reversed for proceedings consistent herewith.

#### MICHIGAN SUPREME COURT.

#### Hernia—An Award Under the Michigan Workmen's Compensation Law Sustained.

BELL T. HAYES-IONIA Co. (June 1, 1916.)

Hernia which develops after a strain from lifting is the result of an "accident" within the meaning of that term as used in the Michigan workmen's compensation law. A workman who suffers from such an injury in the course of his employment is therefore entitled to compensation.

[158 Northwestern Reporter, 179.]

KUHN, J.: The claimant has been awarded compensation under Act No. 10, P. A. 1912. The award was made in the first instance by a committee of arbitration and was approved by the industrial accident board, and that decision is brought to this court by certiorari for a review of the findings.

The substance of the testimony which bears on the alleged accident is that the claimant was employed by the respondent in work on automobile bodies, which required frequent lifting of them; that on May 29, 1914, the window of the room where he was working had been put down during a storm and had swollen enough to



make it stick; after the storm had ceased Bell put it up again, and it required considerable exertion. He testified:

That after lifting the window he "felt something come down that felt quite painful"; that "when I felt the pain after lifting the window I went to the toilet and found a lump there. \* \* \* The lump was about like an egg. It was on my right groin. I never noticed the lump before."

This happened at 4 o'clock. He continued to work, lifting bodies, until 5.30 o'clock, closing time. On his way home he felt faint and complained to his wife of an inclination to vomit. When asked whether he noticed any condition that made him think he had hernia, he said:

It came down Friday night. I got it back Saturday, and Sunday it stayed in place. On Monday when I went to work it came out again.

He did not work Saturday and Sunday, but returned to his usual work on Monday, and suffered pain all day. When he reached home that night the doctor was called, and after some effort reduced the hernia. An operation proved necessary, and was performed, and the claimant was disabled for 10 weeks. Compensation was awarded him for that period at \$6.92 per week, in addition to medical and hospital expenses for three weeks, the period of his confinement.

Among the several points relied upon by respondents for a disallowance of the claim the one most extensively discussed is that the injury did not result from an accident. The argument goes upon the theory that a hernia is the result "not of a single fortuitous event, but either of the anatomical defect of the claimant or of the long-continued lifting for a number of months;" that hernia is the result of a very gradual process; that it is not an accident, but a disease. Medical authorities are quoted from and the testimony of expert witnesses presented to substantiate the theory. But, whether this theory is correct or not, the argument is disposed of by the decision in the recent case of *Robbins v. Original Gas Engine Co.* (157 N. W. 437, Pub. Health Repts., Sept. 1, 1916, p. 2375). There is evidence that the claimant felt a pain in the groin after raising the window and discovered a hernial protuberance immediately afterwards. He continued to work, and "both lifting the window and lifting the body caused this pain. I was pulling up the window when the pain came on, and also when I lifted the body." The work on Monday, after he had "got the hernia back," caused more pain and brought it down again, so that the physician had difficulty reducing it. It is clear that the committee and the board were justified in finding that the hernia was pushed through and made so acute by the lifting of the window as to disable the claimant. See *La Veck v. Parke, Davis & Co.* (157 N. W., 72). Such an injury entitled the claimant to compensation. See *Skinner v. Commercial Travelers' Mutual Accident Association* (157 N. W., 105); *Robbins v. Original Gas Engine Co.*, supra.

The respondents offered in evidence the report of Dr. Knapp, who attended the claimant, in which it was stated:

Patient says for two or three weeks been having pain in groin, and that while closing a window at factory felt strain which in two or three days resulted in strangulated hernia.

It was presented in connection with the following testimony of Dr. Knapp:

I would call it a perfectly fresh puncture. It was evident to me that the hernia was caused as claimed. Indications are to the effect that the act of putting up the window and lifting the body from the work bench caused the bowel to go through and form a sac. \* \* \* I believe, as near as I can tell, he had no rupture before, and he had it afterwards. The preponderance of evidence seems to show that it came on at that time as the result of his work.

Mr. SMITH, Dr. Knapp, did he say anything to you about having had a pain in his side previous to this?

Dr. KNAPP. Afterwards I asked him how long he had had it, and he said he did not know anything about it; on Saturday he lifted the window and the body, and felt it come on him then.

Mr. SMITH. You reported to the insurance company, "Patient says for two or three weeks been having pain in groin"; is that so, Mr. Bell?

Mr. BELL. I don't remember saying that.

Mr. SMITH. The report was made June 9; where do you suppose the doctor got that idea?

Mr. BELL. I might have told him that. I have tried to be honorable and truthful and always have. I don't remember saying that, although I might have said it at that time.

Mr. SMITH. How do you account for this report?

Dr. KNAPP. He must have told me that he had had previous pain there or I would not have made such report. It might be that this condition arose before if that is the same pain, or it might have been a pain in the abdomen lower down.

The board rejected the report. This evidence might properly have been received, since it contradicted a part of Dr. Knapp's testimony. But the error is not of sufficient importance to invalidate the findings. The presence of a structural weakness or actual pain, antedating the injury alleged, in the region where the injury occurred, does not preclude a recovery if the injury itself is distinct and the result of a particular strain causing a sudden protrusion of the intestine. As in *Robbins v. Original Gas Engine Co.*, supra, there was testimony to support a finding that the claimant made a distinct and unusual exertion, that he immediately felt unusual pain, and presently discovered a protrusion through the abdominal wall about the size of an egg. And it may be appropriately said here also that:

It is assumed that it was the first time the sac had been forced through the abdominal wall. If it is also assumed that there was a certain lack of physical integrity in the parts where the injury was manifested, still I think claimant may have compensation for the injury he suffered. (*Robbins v. Original Gas Engine Co.*, 157 N. W. 439; Pub. Health Repts., Sept. 1, 1916, p. 2375.)

See also *La Veck v. Parke, Davis & Co.*, supra, and recent decisions of the Massachusetts court, *Re Madden* (222 Mass. 487, 111 N. E. 379; Pub. Health Repts., July 14, 1916, p. 1877), and *Crowley v. City of Lowell, Mass.* (111 N. E. 786), for an application of the same principle. The rejected evidence could be given its due weight and accorded belief without requiring a finding of no accidental injury on May 29 resulting from the opening of the window.

Complaint is made of the action of the board in excluding the extracts from medical textbooks offered by the respondents as evidence of the true nature of hernia. As the only object of offering such evidence could have been to prove that hernia is not an accidental injury, in view of what has been said on this subject it is unnecessary to discuss this question.

It is contended that the finding of the board that there was an accident is not conclusive on this court, under a correct construction of the provision that the "findings of fact made by the industrial accident board acting within its powers shall, in the absence of fraud, be conclusive." Fraud is not averred or shown. But respondents' counsel, treating this as a finding of fact, contend that the board acts within its power only when it deals with an accident to an employee arising out of the employment, and that, since such facts (viz, that the injury was an accident, the injured person an employee, and the accident one arising out of the employment) are jurisdictional, the board's finding of them is not conclusive on this court. "Unless it has before it an accidental injury arising out of and in the course of the employment, it is beyond its power and authority." If counsel mean that the board's findings of fact are conclusive only when the board is dealing with an accidental injury arising in the course of the employment, it is equivalent to saying that such findings of fact are conclusive only when made after the facts justifying an award have already been established. From this point of view it is difficult to see what facts are to be found or what the purpose of the findings could be. Manifestly something else was intended by the words "acting within its power."

Undoubtedly the board has no jurisdiction to make an award until it has decided upon the facts found by it that the injured person was an employee, that the injury was the result of an accident, and that the accident arose in the course of the employment, and counsel doubtless means to assert only that the conclusions of the board on these points are not binding on this court. Perhaps it is sufficient to say that, since we agree with the conclusion of the board on these points, any discussion of the

question is unnecessary. However, an apparent confusion in the recent decisions deserves some attention.

While the board's findings of fact are undoubtedly conclusive on this court (see *Rayner v. Sligh Furniture Co.*, 180 Mich. 168, 146 N. W. 665; *Lindsteadt v. Sands Salt & Lumber Co.*, 157 N. W. 64), it is clear that the legal conclusions of the Industrial Accident Board, when based upon findings of fact, are subject to the supervision of this court. See recent cases, *Bischoff v. American Car & Foundry Co.*, 157 N. W. 34; *Robbins v. Original Gas Engine Co.* (157 N. W. 437; Pub. Health Repts. Sept. 1, 1916, p. 2375). If it is clear upon the facts found by the board that, as a legal conclusion, an injury was not accidental, or that it did not arise in the course of the employment, a contrary conclusion awarding compensation will not be allowed to stand. The act does not make the board's legal conclusions binding on this court. It was said in *La Veck v. Parke, Davis & Co.* (157 N. W. 72), that "where there is testimony upon which the accident board can base its conclusion, we will not review its action," and cases were cited to support this rule. But we were referring then to a conclusion of fact. In *Redfield v. Compensation Insurance Co.* (183 Mich. 633, 150 N. W. 362), the findings of the board which were treated as final when supported by any evidence were matters purely of fact. In *Bayne v. Riverside Storage & Cartage Co.* (181 Mich. 378, 148 N. W. 412), the question whether the pneumonia which caused the death was caused by a particular straining was one purely of fact, and, since the testimony was conflicting, it was a matter for the determination of the accident board. It was not intended to hold that whether that which caused the pneumonia was an accident, and whether the accident, if it was one, arose in the course of the employment, were purely questions of fact for the board.

Since it has not been shown that the board exceeded its power or acted fraudulently, we must conclude that the hernia was caused by the strain, on the 29th of May, and the order allowing compensation is affirmed.

#### OKLAHOMA CRIMINAL COURT OF APPEALS.

##### **Habit-Forming Drugs—A Conviction for Unlawful Selling of Narcotic Drugs Sustained.**

*HARRISON v. STATE.* (May 27, 1916).

The Criminal Court of Appeals of Oklahoma sustained a conviction under a State statute which prohibited the sale of habit-forming drugs except upon a physician's prescription. This law was published in Public Health Bulletin No. 56 at page 191.

The action was begun by an information, which was filed by the prosecuting attorney. This information was attacked on the ground that it did not allege that the drugs were not sold on a physician's prescription; but the court decided that this allegation was not necessary under the Oklahoma law and that the information was sufficient.

The court also decided that the evidence which was presented was sufficient to support the verdict of guilty.

The opinion appears in 157 Pacific Reporter, page 707.

## MUNICIPAL ORDINANCES, RULES, AND REGULATIONS PERTAINING TO PUBLIC HEALTH.

### WINSTON-SALEM, N. C.

#### Foodstuffs—Protection and Sale—Destruction of Unwholesome—Inspection and Sanitary Regulation of Establishments—Employees. (Ord. June 9, 1916.)

SEC. 543. *Places where food is exposed shall be kept in a sanitary condition.*—Every person, firm, or corporation keeping, maintaining, or being in charge of any factory, public or private market, stall, stand, shop, store, warehouse, cold storage, cart, wagon, or other vehicle in or from which any meat, meat products, fish, oysters, or other sea food, game, fowl, fruit, berries, vegetables, bread or bakery products, ice cream, soft drinks, candies, or other articles or substances, intended for human consumption, are manufactured, held, kept, stored, exposed, or offered for sale or distribution, shall keep the same in a clean and sanitary condition.

SEC. 544. *Protection from flies and insects.*—No person, firm, or corporation shall at any time, within the period beginning the 1st day of April and ending the 1st day of November in any year, place, keep, or expose, offer or prepare for sale, or sell, or store pending sale, any article or substance of human food or drink in any building, premises, or place in the city of Winston-Salem, where such article or substance is not, at such times, so screened as to prevent flying insects from having access to such article or substance. And no person, firm, or corporation shall, at any time within such period of any year, bring into the city for sale or carry or convey or cause to be carried or conveyed upon, along, or over any street, alley, or way in the city, any article or substance of human food or drink, for the purpose of offering or exposing for sale or storing for sale, or which is at such time in course of delivery after sale, unless such article or substance of food or drink, at such times, be covered, screened, or otherwise protected in such manner as not to be accessible to flying insects: *Provided, however,* That no provision of this section shall apply to or affect any article or substance of human food or drink which shall, at such times, be in unbroken packages or containers tightly closed: *Provided further,* That the following foodstuffs shall not be deemed subject to contamination from flying insects and shall not be required to be screened, to-wit: Watermelons, and other melons, oranges, lemons and bananas, where unsliced or unpeeled, and potatoes, cabbages, collards, carrots, turnips, parsnips, onions, squash, and pumpkins.

SEC. 545. *Dining rooms and kitchens of public places, bakeries, markets, and other places shall be screened.*—The dining rooms of all public eating houses, hotels, boarding houses, restaurants, lunch rooms, and the kitchens thereof; all bakeries, confectioneries, candy factories, ice cream factories and parlors, soft drink stands, places using soda fountains, delicatessens, meat markets, and places where milk is bottled or exposed for sale, shall, during the period beginning the 1st day of April and ending the 1st day of November in every year, have all windows, doors, and openings therein properly screened so as to exclude flies from such places.

SEC. 546. *Unlawful to offer for sale unwholesome food.*—No rotten, fermented, diseased, nauseous, unsound, stale, or unwholesome vegetables, berries, melons, fruit, or other articles of food or drink shall be brought into the city of Winston-Salem

for sale or distribution as human food or drink, nor shall any such articles or substances be sold, exposed, prepared, or offered for sale within the city, in or from any cart, vehicle or market, stall, stand, shop, warehouse, cold storage, hotel, boarding house, restaurant, lunch room, or other place of business therein, or be carried for sale or for delivery after sale over and upon any of the streets, alleys, or public places of the city.

SEC. 547. *Destruction of unwholesome food.*—Whenever any health, sanitary, police, or other agent or officer of the health department of the city shall find in or upon any of the places or vehicles referred to in the foregoing section any rotten, diseased, nauseous, or unwholesome foodstuff, substance, or article intended for human food or drink, it shall be the duty of such officer or agent to notify the owner, manager, or person in charge of such article, place, or vehicle to remove such foodstuff or article to some proper place and destroy the same, or such officer or agent may seize such foodstuff or article and destroy it.

SEC. 548. *Places where food or drink is served shall be kept in a sanitary condition; diseased person prohibited from working therein.*—No person, firm, or corporation owning, managing, or in charge of any restaurant, hotel, boarding house, lunch room, ice cream parlor, soft drink stand, or other place where food or drink for human consumption is sold, served or prepared, shall keep or permit such place to be kept in a filthy or insanitary condition. No person suffering from tuberculosis, any venereal, or other communicable disease shall be employed in or about such places in any position which will bring him or her in contact with such food or drink.

SEC. 549. *Food not to be kept in room containing toilet; ventilation required where toilet room connects.*—No meats, meat products, fish, or other sea food, bakery products, soft drinks, ice cream, milk or milk products, candy, fruit, confectionery, vegetables, or other foodstuffs, shall be prepared for sale, kept, exposed for sale, or sold in any room in which a toilet is located, or in any room opening directly into a toilet room unless there is adequate outside ventilation to such toilet room.

SEC. 550. *Inspection of places handling foodstuffs; notice of insanitary condition; refusal to comply with violates this ordinance.*—It shall be the duty of the sanitary officers, health officers, and agents of the department of health to visit, at frequent intervals, each public and private market, stall, shop, stand, store, warehouse, cold storage, storehouse, canning factory, hotel, boarding house, restaurant, lunch room, soft drink stand, bakery, ice cream factory, or other place of business regulated by this chapter, in the city of Winston-Salem, and to inspect each, and also all wagons and other vehicles used therewith, or of vendors or street hawkers in or about which any of the foodstuffs or articles embraced in this chapter are kept, made, held, prepared, or carried for sale or distribution

Notice shall be given, where such premises, places, or vehicles are found to be in an unclean, unwholesome, or unsanitary condition, to remedy the same; and any person, firm, or corporation neglecting or refusing to put any such premises, place, or vehicle in a clean, wholesome, or proper sanitary condition within 24 hours from the time notice is given in writing by the health officer of the city so to do shall be deemed guilty of a violation of this ordinance; and each day the said notice is not complied with shall constitute a separate violation hereof.

SEC. 551. *Each day's failure to comply with any notice authorized by this chapter constitutes a separate violation.*—Where any notice shall be given under the provisions of this chapter to remedy unsanitary conditions, and such notice is disregarded or neglected, after 24 hours from the time the notice was given, unless a different period of time is expressly provided, each day thereafter such unsanitary condition is wilfully permitted to remain shall constitute a separate violation of the ordinance.

SEC. 552. *License, permit, or lease may be revoked for violation of ordinances.*—In addition to the penalty prescribed for the violation of the ordinances of the city of



Winston-Salem, the board of aldermen may revoke the license, lease, or permit of any person, firm, or corporation guilty of violating any of the provisions or sections contained in this chapter; and no fee or license tax, or any part thereof, shall be refunded to any such person, firm, or corporation.

**Milk and Milk Products—Production, Care, and Sale—Ice Cream—Dairy and Food Inspector. (Ord. June 9, 1916.)**

SEC. 505. *Dairy and food inspector.*—The board of aldermen, on recommendation of the committee on health, may elect a dairy and food inspector, whose duties shall be performed with respect to milk, meats, and other foods under the supervision and direction of the health officer.

SEC. 506. *Definition of terms.*—Wherever in these ordinances the term "milk products" is used it shall be understood to mean cream, buttermilk, or skimmed milk.

SEC. 507. *Board of aldermen shall make rules.*—The board of aldermen, on recommendation of the committee on health, shall make such rules as are deemed necessary for the proper regulation of the production and distribution and sale of milk within the city of Winston-Salem. Such rules, regulations, and ordinances shall be promulgated and enforced by the health officer or by his order.

SEC. 508. *Permit required for the sale of milk.*—No person, firm, association or corporation shall sell or offer for sale, at wholesale or retail, milk or cream in the city of Winston-Salem without a permit from the health officer, which shall be issued subject to such conditions as may be imposed under section 50 of the charter.

Such permit shall expire on the 31st of May, and shall be renewable on or before such date in each year, and may be suspended or revoked at any time for cause by the health officer after a hearing and on due notice: *And provided further*, That said permit may be suspended or revoked at any time without notice by said health officer when the milk supply from said dairy or dairy farm is exposed to infection by Asiatic cholera, anthrax, diphtheria, erysipelas (septic sore throat) [sic], scarlet fever, tuberculosis, typhoid fever, so as to render its distribution dangerous to public health.

SEC. 509. *Application for permit for sale of milk.*—No permit for sale of milk and cream in the city of Winston-Salem shall be issued unless written application, subscribed and sworn to by the applicant, has been made therefor in the form prescribed by the health officer. Every application for a permit to sell milk or cream at retail or wholesale shall contain the name of each producer, from whom the applicant secures or expects to secure milk or cream for sale, together with the approximate amount of milk or cream to be furnished by each such producer, and upon change in the source or amount of supply notice thereof shall be given promptly to the health officer.

SEC. 510. *List of customers shall be furnished by dairymen.*—Every person, firm, association, or corporation holding a permit to sell milk and cream in the city of Winston-Salem shall furnish a list of the names of his customers and their addresses every 60 days, for file in the office of the health officer.

SEC. 511. *Diseased persons prohibited from working in dairies.*—That no person suffering from tuberculosis, or who has knowingly within a period specified by the health officer been exposed to diphtheria, scarlet fever, erysipelas (septic sore throat) [sic], anthrax, or other dangerous diseases, shall work or assist in or about any dairy or dairy farm; no proprietor, manager, superintendent of any dairy or dairy farm sending or delivering milk in the city of Winston-Salem shall knowingly permit any person suffering or exposed as aforesaid to work or assist in or about said dairy or dairy farm.

SEC. 512. *Inspection of dairies.*—The health officer, or his duly authorized agent, shall make a sanitary inspection of every dairy farm where milk and cream are pro-



duced, for sale in the city of Winston-Salem, and shall score each such dairy farm on a prescribed score card, approved by the health committee of the board of aldermen.

SEC. 513. *No permit issued to insanitary dairy.*—No permit to sell milk in the city of Winston-Salem shall be issued unless the premises where it is proposed to handle milk or cream shall, in the opinion of the local health officer or his representative, after inspection, have been rendered clean and sanitary; and unless each farm and dairy where such milk and cream are produced shall have been rated after inspection by the health officer or his representative at least 40 per cent on the score card prescribed by the health committee of the board of aldermen.

SEC. 514. *Cattle shall be tested for tuberculosis; testing fee.*—All cattle supplying milk and cream to the city of Winston-Salem shall be tested for tuberculosis at least every 12 months by the veterinarian of the health department or a veterinarian approved by the health department. All cattle found reacting to the tuberculin test shall be either destroyed or isolated from the nonreacting cattle of the herd. The premises shall be cleansed and disinfected as prescribed by the health officer. The nonreacting cattle of said herd shall be retested after two months have elapsed. A charge of \$1 per head shall be made and collected in advance from holders of permits by the veterinarian of the health department for all cattle tested by him, which fee shall be paid into the city treasury. No cows shall be added to a tested herd until such cows are tuberculin tested.

SEC. 515. *Renewal of permit subject to inspection.*—No permit will be renewed unless inspection has been made within the preceding six months by the health officer, or his authorized agent, or unless each farm or dairy where such milk or cream is produced has been rated by the health officer, or his agent, at 40 per cent on the prescribed score card.

SEC. 516. *Permits to be publicly displayed.*—Permits to sell milk or cream shall be publicly displayed in each milk depot, and all milk wagons and vehicles shall have the name of the owner, the number of the permit, and the location of the dairy farm from which said wagon or vehicle hauls milk painted thereon plainly and legibly.

SEC. 517. *Sale of adulterated and unwholesome milk prohibited.*—That no person shall offer or have for sale in the city of Winston-Salem any unwholesome, watered, or adulterated milk or milk known as swill milk or milk from cows that are fed on swill or garbage or any like substance, or any butter or cheese made from any such milk; nor any milk or cream, butter or cheese or buttermilk made therefrom, from a cow 15 days before or 10 days after parturition. No person shall offer for sale, or have in his possession with intent to sell, any milk containing more than 88 per cent of water and less than 12 per cent of total solids, of which at least  $3\frac{1}{2}$  per cent shall be butter fat.

No skimmed milk shall contain more than 92 per cent water or less than 8 per cent solids; and no milk shall contain over 500,000 bacteria per c. c. nor cream 1,000,000 per c. c.

SEC. 518. *Milk and cream shall be kept in sanitary condition.*—No milk, or cream or ice cream shall be served or sold or kept for sale under any conditions which, in the opinion of the health officer, or his authorized agent, are not clean and sanitary.

All vessels containing such milk or cream for sale shall at all times be covered and kept cool, not over 55 degrees Fahrenheit, and so placed that the contents will not be exposed to sun, dust, dirt, flies, or other insects.

SEC. 519. *Bottling of milk.*—No milk or cream shall be served or sold in bottles, or offered for sale in bottles, unless the bottling is done under clean and sanitary conditions at the place of production or collecting or distributing station.

Each bottle shall be sealed with a cap and on each cap shall be printed in letters in large plain type the character of the contents, together with the name and address of the producer or dealer.

SEC. 520. *Utensils and apparatus shall be sanitary.*—All utensils and apparatus used in the handling of milk and cream intended for sale or distribution shall be maintained in a sanitary condition.

The health officer, or his authorized agent, shall have authority to seize and condemn any utensil or container when found by him to be in such condition that it can not be rendered clean and sanitary by washing as a receptacle for milk or cream and shall so mark or destroy such utensil or container.

SEC. 521. *Pasteurized milk and cream.*—No milk or cream shall be offered for sale as pasteurized unless such milk or cream be subjected to an average temperature of 145° F. for not less than 30 minutes, and no milk or cream which has been heated by any method shall be sold or offered for sale unless the heating conforms to the provisions of this section.

After pasteurization the milk or cream shall be immediately cooled and placed in clean containers, and the containers shall be immediately sealed and kept at a temperature not higher than 55° F. No milk or cream shall be pasteurized but once.

All milk or cream pasteurized shall be labeled as such.

\* \* \* \* \*

SEC. 523. *Milk to be sold in containers.*—All milk or milk products shall be delivered to the consumer in clean vessels with tight covers, and no milk or milk products shall be poured from one container into another on the street, nor be displayed for sale in any warehouse or upon the street or other public place where such milk or milk products are liable to contamination from flies, dust, or other source.

SEC. 524. *Illegal permits and labels.*—No person shall counterfeit or make an imitation of, publish or have in his possession any counterfeit or imitation of any permit or label authorized by the foregoing sections, or shall use any labels or permits issued by the city of Winston-Salem without permission, or when the permit has been suspended or revoked as provided for in said sections.

#### **Meat, Meat Products, and Fish—Inspection, Protection, and Sale—Stores and Vehicles—Employees. (Ord. June 9, 1916.)**

SEC. 525. *All meat must be inspected by the health officer or his authorized agents before it may be sold.*—No person, firm, or corporation shall, within the corporate limits of the city of Winston-Salem, sell or expose for sale for human consumption any fresh meat, not considered "game," or have the same in his possession with intent to sell, unless the said meat shall have been slaughtered in accordance with the ordinances, rules, and regulations of the city and stamped or tagged so as to show that it has been approved by the health officer or his authorized agent, except such meat as shall bear the mark, stamp, or tag indicating that it has been inspected by the Bureau of Animal Industry of the United States Department of Agriculture: *Provided, however,* Nothing herein contained shall be construed to prohibit producers outside of the city limits from slaughtering calves and hogs of their own raising and offering the same for sale after the same shall have been inspected and approved by the health officer or his authorized agent.

SEC. 526. *Term "fresh meat" defined.*—The term "fresh meat," as used in this chapter, shall be construed to include all slaughtered beef, pork, mutton, goat, venison, or other meat which has not been thoroughly dry salted, smoked, or cured: *Provided,* That nothing herein shall prevent any person from selling wild game, the sale of which is not expressly prohibited.

SEC. 527. *Fresh meat may be sold only from city markets and licensed shops.*—It shall be unlawful for any person, firm, or corporation to sell, expose for sale or offer for sale fresh meat of any kind within the city of Winston-Salem, except in or from the city markets, or such private markets or meat shops as may be licensed by the board of aldermen in accordance with the ordinances of the city: *Provided,* Nothing herein contained shall be construed to prohibit the sale of fresh meat by wholesale to the

city markets or to licensed retailers of meat, nor shall producers be prohibited from selling the meat of animals of their own raising, in accordance with the ordinances of the city of Winston-Salem.

SEC. 528. *License required for retail dealers in fresh meat.*—Every person, firm, or corporation desiring to conduct a market, store, or shop for the sale of fresh meat to the consumer, at any place other than in the city markets, shall first obtain a license therefor from the board of aldermen, or from some officer of the city vested with authority to grant the same, and pay a tax of \$25, as provided for in the license tax ordinances of the city.

SEC. 529. *Certain equipment required for shops where fresh meat is kept or sold.*—Every person, firm, or corporation is forbidden to engage in business in the city of Winston-Salem as a retail dealer in fresh meat of any kind, unless and until the store, shop, market, or place where the said meat is to be sold, exposed for sale or kept, shall be equipped with a modern, standard, sanitary meat block; sanitary porcelain, stone, or metal counters; standard sanitary refrigerator of sufficient construction and capacity to preserve all meat kept for sale in said shop, market, or place in a sanitary and wholesome condition at all seasons of the year; a set of standard scales which shall comply with the laws of North Carolina; and screens for all doors, windows, and openings in said shop, market, or place so constructed as to effectually prevent the entrance of flies or other insects. No such store, shop, market, or place shall be opened for business until the same, with its equipment, shall have been inspected and approved by the health officer or his authorized agent or some other properly authorized officer of the city: *Provided*, That this section shall not apply to meat dealers in the city markets.

Each and every day, or part thereof, such business is carried on in violation of the provisions hereof, shall constitute a separate and distinct offense.

SEC. 530. *Sausage and meat products may be sold by producer, when.*—Whole pork sausage, liver pudding, souse, ribs, backbones, and the head and feet of hogs raised by the person offering same for sale may be sold in the city of Winston-Salem during the period from October 15 to April 1 of each year, direct to the consumer, to the city markets, or to licensed retailers of meat, provided the same shall have been inspected by the health officer or his authorized agents or other authorized officer of the city and is approved and tagged by him.

SEC. 531. *Sausage must not contain any excretory or secretory organs, any unwholesome meat, or any adulterant.*—No person shall sell, offer for sale, or have in his possession with intent to sell, within the city of Winston-Salem, any sausage which shall contain the whole or a part of any excretory or secretory organ of any domestic animal; nor shall any person offer for sale or sell any sausage made from putrid, tainted, decomposed, diseased, or unwholesome meat of any kind; nor shall any person have in his possession for sale, offer for sale, or sell any sausage which shall have been adulterated. The excretory and secretory organs herein referred to are: The liver, kidney, pancreas, spleen, testicle, lungs, and udder: *Provided, however*, This section shall not be construed to prohibit the sale of liver pudding or liver sausage, where expressly called for by the purchaser.

SEC. 532. *Producers shall present meat for inspection at designated time and place and pay inspection fee.*—All producers desiring to sell meat from animals of their own raising, within the city of Winston-Salem, shall present the said meat for inspection at such time and place as shall be designated by the board of aldermen, and shall pay to the officer of the city inspecting the same such inspection fees as shall be prescribed by the said board.

SEC. 533. *Inspection of markets and shops.*—It shall be the duty of the health officer, or his authorized agents, to inspect all of the markets now established within the corporate limits of the city of Winston-Salem, and also all shops or places where fresh meat is kept or sold; and it shall be his duty to carefully examine all refrigerators, ice boxes, coops, counters, meat blocks, meat racks, cutting tools, and all other articles

or equipment which come in contact with the commodity sold in the stalls, markets, shops or places, or used in connection therewith. He shall see that the said articles or equipment, the stalls and premises, and the markets, shops or places shall at all times be kept in a clean and sanitary condition.

SEC. 534. *The health officer or his authorized agents may enter and inspect any market.*—The health officer, or his authorized agents, shall be authorized to enter and inspect any market, store, or other place where meat is stored, kept for sale, or sold to the meat dealers, market men, or residents of the city of Winston-Salem.

SEC. 535. *Permit required for sale of fish, oysters, or sea food.*—No person, firm, or corporation shall engage in the sale of fish, oysters, or sea food within the city of Winston-Salem without first having obtained a permit therefor from the board of aldermen or from some officer of the city vested with authority to grant same.

SEC. 536. *Fish, oysters, and sea food to be inspected.*—It shall be the duty of the dairy and food inspector, under the direction of the health officer, or by other officers of the city authorized therefor, to inspect all fish, oysters and sea food offered for sale in the city, and to condemn all such fish, oysters, and sea food as he shall find to be tainted, spoiled, unwholesome, or in any way unfit for human consumption; and the same shall be destroyed or otherwise disposed of as he shall direct.

SEC. 537. *The health officer or his authorized agents shall condemn unwholesome meat.*—The health officer, or his authorized agents, shall condemn any tainted, spoiled, unsound, or unwholesome meat offered for sale in the city of Winston-Salem contrary to the provisions of the ordinances, and he shall cause the same to be removed from the city or destroyed, at the expense of the owner or person offering the same for sale.

SEC. 538. *Unlawful to sell or offer for sale unwholesome meat, fish, oysters, or sea food.*—It shall be unlawful for any person, firm, or corporation to have in possession for sale, offer for sale, or sell within the city of Winston-Salem any meat, fish, oysters, or sea food which is unfit for human consumption.

SEC. 539. *Meat and articles of food must be protected from contamination.*—It shall be unlawful for any person, firm, or corporation to hang, place, or expose any meat, or other articles of food intended for human consumption, in such manner that the same will be subject to contamination, from the floors or walls of the building where the same is kept, or be exposed to flies, dirt, or other sources of contamination. No meat or other articles of food shall be placed on any counter, block, rack, or any other place without being properly screened or protected from dirt, flies, and other sources of contamination.

SEC. 540. *Meat shall be transported in clean wagons.*—No person shall transport any fresh meat from the city abattoir or from any other place in the city unless it is conveyed in a clean covered wagon and be wrapped in a clean white cloth.

SEC. 541. *Unlawful for diseased person to work in place where fresh meat is handled.*—It shall be unlawful for any person suffering from any communicable disease to work in any of the fish or meat markets, or in any place where fresh meat is stored or kept in the city; and it shall be unlawful for any person, firm, or corporation to have in employment in any such market or place any person known to be suffering from a communicable disease.

SEC. 542. *Unlawful to obtain meat stamps by fraud or to alter or counterfeit same.*—It shall be unlawful for any person to deface, alter, counterfeit, or destroy any tags, stamps, or marks placed upon any fresh meat by the health officer or his authorized agent or other authorized officer of the city; and it shall be unlawful for any person to obtain any stamp or tag from the health officer, or from any one else by fraud, or by any false or fraudulent representation, or by the withholding of any material fact.